

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
30 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.35	\$75.79	3.10%	3.17%	NA	6.00%	3.50%	4.75%	6.66%	7.92%	9.19%
Alliant Energy Corporation	LNT	\$1.42	\$43.38	3.27%	3.38%	6.00%	7.25%	6.50%	6.58%	9.37%	9.96%	10.64%
Ameren Corporation	AEE	\$1.90	\$67.71	2.81%	2.91%	6.80%	7.70%	7.50%	7.33%	9.70%	10.24%	10.61%
American Electric Power Company, Inc.	AEP	\$2.68	\$77.09	3.48%	3.57%	5.80%	5.74%	4.50%	5.35%	8.05%	8.92%	9.38%
Avangrid, Inc.	AGR	\$1.76	\$49.45	3.56%	3.74%	8.70%	9.20%	12.00%	9.97%	12.41%	13.70%	15.77%
Black Hills Corporation	BKH	\$2.02	\$66.05	3.06%	3.14%	4.70%	4.46%	6.50%	5.22%	7.59%	8.36%	9.66%
CMS Energy Corporation	CMS	\$1.53	\$51.15	2.99%	3.09%	6.40%	7.09%	7.00%	6.83%	9.49%	9.92%	10.19%
DTE Energy Company	DTE	\$3.78	\$114.83	3.29%	3.40%	6.00%	5.49%	7.50%	6.33%	8.87%	9.73%	10.92%
El Paso Electric Company	EE	\$1.44	\$51.25	2.81%	2.87%	4.40%	5.10%	3.00%	4.17%	5.85%	7.04%	7.98%
Evergy, Inc.	EVRG	\$1.90	\$57.06	3.33%	3.47%	7.80%	9.20%	NMF	8.50%	11.26%	11.97%	12.68%
Hawaiian Electric Industries, Inc.	HE	\$1.28	\$36.69	3.49%	3.59%	6.40%	7.80%	3.50%	5.90%	7.05%	9.49%	11.42%
NextEra Energy, Inc.	NEE	\$5.00	\$177.20	2.82%	2.94%	7.70%	7.45%	9.00%	8.05%	10.38%	10.99%	11.95%
NorthWestern Corporation	NWE	\$2.30	\$62.50	3.68%	3.73%	2.60%	2.59%	2.50%	2.56%	6.23%	6.29%	6.33%
OGE Energy Corp.	OGE	\$1.46	\$40.48	3.61%	3.71%	5.20%	NA	6.00%	5.60%	8.90%	9.31%	9.71%
Otter Tail Corporation	OTTR	\$1.40	\$48.31	2.90%	3.03%	NA	9.00%	9.00%	9.00%	12.03%	12.03%	12.03%
Pinnacle West Capital Corporation	PNW	\$2.95	\$86.95	3.39%	3.48%	4.60%	4.16%	6.00%	4.92%	7.62%	8.40%	9.49%
PNM Resources, Inc.	PNM	\$1.16	\$41.99	2.76%	2.84%	4.70%	4.10%	7.50%	5.43%	6.92%	8.27%	10.37%
Portland General Electric Company	POR	\$1.45	\$46.90	3.09%	3.16%	3.30%	5.05%	4.00%	4.12%	6.44%	7.27%	8.22%
Southern Company	SO	\$2.40	\$47.59	5.04%	5.12%	4.50%	1.68%	3.50%	3.23%	6.77%	8.35%	9.66%
Wisconsin Energy Corporation	WEC	\$2.36	\$71.63	3.29%	3.38%	4.40%	4.70%	7.00%	5.37%	7.77%	8.75%	10.41%
Xcel Energy Inc.	XEL	\$1.52	\$51.14	2.97%	3.06%	5.90%	6.64%	5.50%	6.01%	8.55%	9.07%	9.71%
Proxy Group Mean				3.27%	3.37%	5.57%	6.02%	6.08%	5.96%	8.47%	9.33%	10.30%
Proxy Group Median				3.27%	3.38%	5.80%	5.87%	6.25%	5.60%	8.05%	9.07%	10.19%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional, equals indicated number of trading day average as of February 15, 2019

[3] Equals [1] / [2]

[4] Equals [3] x (1 + 0.5 x [8])

[5] Source: Zacks

[6] Source: Yahoo! Finance

[7] Source: Value Line

[8] Equals Average([5], [6], [7])

[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])

[10] Equals [4] + [8]

[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
90 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.35	\$76.90	3.06%	3.13%	NA	6.00%	3.50%	4.75%	6.61%	7.88%	9.15%
Alliant Energy Corporation	LNT	\$1.42	\$43.76	3.24%	3.35%	6.00%	7.25%	6.50%	6.58%	9.34%	9.93%	10.61%
Ameren Corporation	AEE	\$1.90	\$67.10	2.83%	2.94%	6.80%	7.70%	7.50%	7.33%	9.73%	10.27%	10.64%
American Electric Power Company, Inc.	AEP	\$2.68	\$75.90	3.53%	3.63%	5.80%	5.74%	4.50%	5.35%	8.11%	8.97%	9.43%
Avangrid, Inc.	AGR	\$1.76	\$49.34	3.57%	3.74%	8.70%	9.20%	12.00%	9.97%	12.42%	13.71%	15.78%
Black Hills Corporation	BKH	\$2.02	\$64.12	3.15%	3.23%	4.70%	4.46%	6.50%	5.22%	7.68%	8.45%	9.75%
CMS Energy Corporation	CMS	\$1.53	\$50.75	3.01%	3.12%	6.40%	7.09%	7.00%	6.83%	9.51%	9.95%	10.21%
DTE Energy Company	DTE	\$3.78	\$114.88	3.29%	3.39%	6.00%	5.49%	7.50%	6.33%	8.87%	9.72%	10.91%
El Paso Electric Company	EE	\$1.44	\$54.34	2.65%	2.71%	4.40%	5.10%	3.00%	4.17%	5.69%	6.87%	7.82%
Evergy, Inc.	EVRG	\$1.90	\$57.59	3.30%	3.44%	7.80%	9.20%	NMF	8.50%	11.23%	11.94%	12.65%
Hawaiian Electric Industries, Inc.	HE	\$1.28	\$37.01	3.46%	3.56%	6.40%	7.80%	3.50%	5.90%	7.02%	9.46%	11.39%
NextEra Energy, Inc.	NEE	\$5.00	\$175.87	2.84%	2.96%	7.70%	7.45%	9.00%	8.05%	10.40%	11.01%	11.97%
NorthWestern Corporation	NWE	\$2.30	\$61.78	3.72%	3.77%	2.60%	2.59%	2.50%	2.56%	6.27%	6.33%	6.37%
OGE Energy Corp.	OGE	\$1.46	\$39.18	3.73%	3.83%	5.20%	NA	6.00%	5.60%	9.02%	9.43%	9.84%
Otter Tail Corporation	OTTR	\$1.40	\$47.95	2.92%	3.05%	NA	9.00%	9.00%	9.00%	12.05%	12.05%	12.05%
Pinnacle West Capital Corporation	PNW	\$2.95	\$86.69	3.40%	3.49%	4.60%	4.16%	6.00%	4.92%	7.63%	8.41%	9.50%
PNM Resources, Inc.	PNM	\$1.16	\$41.40	2.80%	2.88%	4.70%	4.10%	7.50%	5.43%	6.96%	8.31%	10.41%
Portland General Electric Company	POR	\$1.45	\$46.88	3.09%	3.16%	3.30%	5.05%	4.00%	4.12%	6.44%	7.27%	8.22%
Southern Company	SO	\$2.40	\$46.26	5.19%	5.27%	4.50%	1.68%	3.50%	3.23%	6.91%	8.50%	9.80%
Wisconsin Energy Corporation	WEC	\$2.36	\$70.80	3.33%	3.42%	4.40%	4.70%	7.00%	5.37%	7.81%	8.79%	10.45%
Xcel Energy Inc.	XEL	\$1.52	\$50.58	3.01%	3.10%	5.90%	6.64%	5.50%	6.01%	8.59%	9.11%	9.75%
Proxy Group Mean				3.29%	3.39%	5.57%	6.02%	6.08%	5.96%	8.49%	9.35%	10.32%
Proxy Group Median				3.24%	3.35%	5.80%	5.87%	6.25%	5.60%	8.11%	9.11%	10.21%

Notes:

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[8] Equals Average([5], [6], [7])

[9] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7])) + Minimum([5], [6], [7])

[10] Equals [4] + [8]

[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Constant Growth Discounted Cash Flow Model with Half Year Growth Adjustment
180 Day Average Stock Price

Company	Ticker	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Value Line Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
ALLETE, Inc.	ALE	\$2.35	\$76.55	3.07%	3.14%	NA	6.00%	3.50%	4.75%	6.62%	7.89%	9.16%
Alliant Energy Corporation	LNT	\$1.42	\$43.06	3.30%	3.41%	6.00%	7.25%	6.50%	6.58%	9.40%	9.99%	10.67%
Ameren Corporation	AEE	\$1.90	\$64.47	2.95%	3.06%	6.80%	7.70%	7.50%	7.33%	9.85%	10.39%	10.76%
American Electric Power Company, Inc.	AEP	\$2.68	\$72.93	3.67%	3.77%	5.80%	5.74%	4.50%	5.35%	8.26%	9.12%	9.58%
Avangrid, Inc.	AGR	\$1.76	\$49.90	3.53%	3.70%	8.70%	9.20%	12.00%	9.97%	12.38%	13.67%	15.74%
Black Hills Corporation	BKH	\$2.02	\$61.83	3.27%	3.35%	4.70%	4.46%	6.50%	5.22%	7.80%	8.57%	9.87%
CMS Energy Corporation	CMS	\$1.53	\$49.29	3.10%	3.21%	6.40%	7.09%	7.00%	6.83%	9.60%	10.04%	10.30%
DTE Energy Company	DTE	\$3.78	\$111.00	3.41%	3.51%	6.00%	5.49%	7.50%	6.33%	8.99%	9.84%	11.03%
El Paso Electric Company	EE	\$1.44	\$57.24	2.52%	2.57%	4.40%	5.10%	3.00%	4.17%	5.55%	6.73%	7.68%
Evergy, Inc.	EVRG	\$1.90	\$56.71	3.35%	3.49%	7.80%	9.20%	NMF	8.50%	11.28%	11.99%	12.70%
Hawaiian Electric Industries, Inc.	HE	\$1.28	\$35.90	3.57%	3.67%	6.40%	7.80%	3.50%	5.90%	7.13%	9.57%	11.50%
NextEra Energy, Inc.	NEE	\$5.00	\$171.99	2.91%	3.02%	7.70%	7.45%	9.00%	8.05%	10.47%	11.07%	12.04%
NorthWestern Corporation	NWE	\$2.30	\$59.97	3.84%	3.88%	2.60%	2.59%	2.50%	2.56%	6.38%	6.45%	6.49%
OGE Energy Corp.	OGE	\$1.46	\$37.55	3.89%	4.00%	5.20%	NA	6.00%	5.60%	9.19%	9.60%	10.00%
Otter Tail Corporation	OTTR	\$1.40	\$47.92	2.92%	3.05%	NA	9.00%	9.00%	9.00%	12.05%	12.05%	12.05%
Pinnacle West Capital Corporation	PNW	\$2.95	\$83.10	3.55%	3.64%	4.60%	4.16%	6.00%	4.92%	7.78%	8.56%	9.66%
PNM Resources, Inc.	PNM	\$1.16	\$40.10	2.89%	2.97%	4.70%	4.10%	7.50%	5.43%	7.05%	8.40%	10.50%
Portland General Electric Company	POR	\$1.45	\$45.72	3.17%	3.24%	3.30%	5.05%	4.00%	4.12%	6.52%	7.35%	8.30%
Southern Company	SO	\$2.40	\$45.92	5.23%	5.31%	4.50%	1.68%	3.50%	3.23%	6.95%	8.54%	9.84%
Wisconsin Energy Corporation	WEC	\$2.36	\$68.11	3.47%	3.56%	4.40%	4.70%	7.00%	5.37%	7.94%	8.92%	10.59%
Xcel Energy Inc.	XEL	\$1.52	\$48.50	3.13%	3.23%	5.90%	6.64%	5.50%	6.01%	8.72%	9.24%	9.88%
Proxy Group Mean				3.37%	3.47%	5.57%	6.02%	6.08%	5.96%	8.57%	9.43%	10.40%
Proxy Group Median				3.30%	3.41%	5.80%	5.87%	6.25%	5.60%	8.26%	9.24%	10.30%

Notes:

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[10] Equals [4] + [8]

[11] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7])) + Maximum([5], [6], [7])

Multi-Stage Growth Discounted Cash Flow Model
30 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal				
			Value											PEG				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio				
ALLETE, Inc.	ALE	\$75.79	NA	6.00%	3.50%	4.75%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.33%	22.91	4.31				
Alliant Energy Corporation	LNT	\$43.38	6.00%	7.25%	6.50%	6.58%	5.32%	63.00%	64.00%	65.57%	\$0.00	9.13%	18.11	3.41				
Ameren Corporation	AEE	\$67.71	6.80%	7.70%	7.50%	7.33%	5.32%	58.00%	59.00%	65.57%	\$0.00	8.86%	19.51	3.67				
American Electric Power Company, Inc.	AEP	\$77.09	5.80%	5.74%	4.50%	5.35%	5.32%	68.00%	65.00%	65.57%	\$0.00	8.91%	19.23	3.62				
Avangrid, Inc.	AGR	\$49.45	8.70%	9.20%	12.00%	9.97%	5.32%	70.00%	67.00%	65.57%	\$0.00	8.95%	19.03	3.58				
Black Hills Corporation	BKH	\$66.05	4.70%	4.46%	6.50%	5.22%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.09%	18.28	3.44				
CMS Energy Corporation	CMS	\$51.15	6.40%	7.09%	7.00%	6.83%	5.32%	60.00%	59.00%	65.57%	\$0.00	8.86%	19.48	3.66				
DTE Energy Company	DTE	\$114.83	6.00%	5.49%	7.50%	6.33%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.34%	17.18	3.23				
El Paso Electric Company	EE	\$51.25	4.40%	5.10%	3.00%	4.17%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.60%	21.04	3.96				
Evergy, Inc.	EVRG	\$57.06	7.80%	9.20%	NMF	8.50%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.20%	17.77	3.34				
Hawaiian Electric Industries, Inc.	HE	\$36.69	6.40%	7.80%	3.50%	5.90%	5.32%	61.00%	62.00%	65.57%	\$0.00	8.83%	19.66	3.70				
NextEra Energy, Inc.	NEE	\$177.20	7.70%	7.45%	9.00%	8.05%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.68%	20.53	3.86				
NorthWestern Corporation	NWE	\$62.50	2.60%	2.59%	2.50%	2.56%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.65%	20.74	3.90				
OGE Energy Corp.	OGE	\$40.48	5.20%	NA	6.00%	5.60%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.07%	18.38	3.46				
Otter Tail Corporation	OTTR	\$48.31	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.05%	18.50	3.48				
Pinnacle West Capital Corporation	PNW	\$86.95	4.60%	4.16%	6.00%	4.92%	5.32%	62.00%	62.00%	65.57%	\$0.00	9.05%	18.51	3.48				
PNM Resources, Inc.	PNM	\$41.99	4.70%	4.10%	7.50%	5.43%	5.32%	50.00%	50.00%	65.57%	\$0.00	8.67%	20.59	3.87				
Portland General Electric Company	POR	\$46.90	3.30%	5.05%	4.00%	4.12%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.69%	20.48	3.85				
Southern Company	SO	\$47.59	4.50%	1.68%	3.50%	3.23%	5.32%	78.00%	73.00%	65.57%	\$0.00	9.93%	14.99	2.82				
Wisconsin Energy Corporation	WEC	\$71.63	4.40%	4.70%	7.00%	5.37%	5.32%	67.00%	65.00%	65.57%	(\$0.00)	8.67%	20.61	3.88				
Xcel Energy Inc.	XEL	\$51.14	5.90%	6.64%	5.50%	6.01%	5.32%	61.00%	63.00%	65.57%	\$0.00	8.89%	19.34	3.64				
											Mean	8.93%						
											Max	9.93%						
											Min	8.33%						
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	\$3.13	\$3.28	\$3.43	\$3.60	\$3.77	\$3.95	\$4.13	\$4.34	\$4.55	\$4.78	\$5.02	\$5.29	\$5.57	\$5.86	\$6.17	\$6.50	\$6.85
Alliant Energy Corporation	LNT	\$1.99	\$2.12	\$2.26	\$2.41	\$2.57	\$2.74	\$2.92	\$3.10	\$3.29	\$3.49	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05
Ameren Corporation	AEE	\$2.77	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.24	\$4.53	\$4.83	\$5.14	\$5.45	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.46
American Electric Power Company, Inc.	AEP	\$3.62	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.95	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.49	\$7.89	\$8.31
Avangrid, Inc.	AGR	\$1.67	\$1.84	\$2.02	\$2.22	\$2.44	\$2.69	\$2.95	\$3.22	\$3.50	\$3.76	\$4.02	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$5.53
Black Hills Corporation	BKH	\$3.38	\$3.56	\$3.74	\$3.94	\$4.14	\$4.36	\$4.59	\$4.83	\$5.08	\$5.35	\$5.63	\$5.93	\$6.24	\$6.58	\$6.93	\$7.29	\$7.68
CMS Energy Corporation	CMS	\$2.17	\$2.32	\$2.48	\$2.65	\$2.83	\$3.02	\$3.23	\$3.44	\$3.66	\$3.88	\$4.10	\$4.33	\$4.56	\$4.80	\$5.06	\$5.33	\$5.61
DTE Energy Company	DTE	\$5.73	\$6.09	\$6.48	\$6.89	\$7.32	\$7.79	\$8.28	\$8.79	\$9.32	\$9.86	\$10.42	\$10.99	\$11.57	\$12.19	\$12.84	\$13.52	\$14.24
El Paso Electric Company	EE	\$2.42	\$2.52	\$2.63	\$2.74	\$2.85	\$2.97	\$3.09	\$3.23	\$3.37	\$3.53	\$3.71	\$3.90	\$4.10	\$4.32	\$4.55	\$4.80	\$5.05
Evergy, Inc.	EVRG	NA	\$2.50	\$2.71	\$2.94	\$3.19	\$3.46	\$3.76	\$4.06	\$4.36	\$4.66	\$4.96	\$5.25	\$5.53	\$5.82	\$6.13	\$6.46	\$6.80
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.74	\$1.84	\$1.95	\$2.06	\$2.18	\$2.31	\$2.45	\$2.59	\$2.73	\$2.88	\$3.04	\$3.20	\$3.37	\$3.55	\$3.74	\$3.94
NextEra Energy, Inc.	NEE	\$6.50	\$7.02	\$7.59	\$8.20	\$8.86	\$9.57	\$10.34	\$11.13	\$11.92	\$12.72	\$13.51	\$14.29	\$15.05	\$15.85	\$16.70	\$17.58	\$18.52
NorthWestern Corporation	NWE	\$3.34	\$3.43	\$3.51	\$3.60	\$3.70	\$3.79	\$3.89	\$4.01	\$4.14	\$4.31	\$4.50	\$4.72	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11
OGE Energy Corp.	OGE	\$1.92	\$2.03	\$2.14	\$2.26	\$2.39	\$2.52	\$2.66	\$2.81	\$2.97	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$4.06	\$4.27	\$4.50
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.65	\$4.88	\$5.12	\$5.37	\$5.63	\$5.91	\$6.20	\$6.52	\$6.85	\$7.21	\$7.59	\$7.99	\$8.41	\$8.86	\$9.33	\$9.83
PNM Resources, Inc.	PNM	\$1.92	\$2.02	\$2.13	\$2.25	\$2.37	\$2.50	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.00	\$4.22	\$4.44
Portland General Electric Company	POR	\$2.29	\$2.38	\$2.48	\$2.58	\$2.69	\$2.80	\$2.92	\$3.04	\$3.18	\$3.33	\$3.49	\$3.67	\$3.87	\$4.07	\$4.29	\$4.52	\$4.76
Southern Company	SO	\$3.21	\$3.31	\$3.42	\$3.53	\$3.64	\$3.76	\$3.88	\$4.02	\$4.18	\$4.36	\$4.56	\$4.79	\$5.04	\$5.31	\$5.59	\$5.89	\$6.20
Wisconsin Energy Corporation	WEC	\$3.14	\$3.31	\$3.49	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.86	\$7.22
Xcel Energy Inc.	XEL	\$2.30	\$2.44	\$2.58	\$2.74	\$2.91	\$3.08	\$3.27	\$3.46	\$3.66	\$3.86	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$5.29	\$5.57

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVERG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.27	\$2.37	\$2.49	\$2.61	\$2.73	\$2.86	\$2.99	\$3.14	\$3.30	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$4.49	\$156.93
Alliant Energy Corporation	LNT	\$1.42	\$1.53	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.27	\$2.40	\$2.55	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$91.39
Ameren Corporation	AEE	\$1.85	\$2.00	\$2.16	\$2.33	\$2.54	\$2.76	\$2.99	\$3.23	\$3.47	\$3.72	\$3.97	\$4.19	\$4.41	\$4.64	\$4.89	\$145.47
American Electric Power Company, Inc.	AEP	\$2.73	\$2.84	\$2.94	\$3.05	\$3.22	\$3.40	\$3.58	\$3.78	\$3.98	\$4.20	\$4.43	\$4.67	\$4.91	\$5.18	\$5.45	\$159.84
Avangrid, Inc.	AGR	\$1.41	\$1.53	\$1.66	\$1.80	\$1.97	\$2.15	\$2.32	\$2.49	\$2.65	\$2.81	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$105.21
Black Hills Corporation	BKH	\$2.21	\$2.30	\$2.39	\$2.48	\$2.67	\$2.87	\$3.08	\$3.31	\$3.55	\$3.82	\$4.09	\$4.31	\$4.54	\$4.78	\$5.04	\$140.48
CMS Energy Corporation	CMS	\$1.49	\$1.58	\$1.68	\$1.78	\$1.93	\$2.09	\$2.26	\$2.43	\$2.61	\$2.80	\$2.99	\$3.15	\$3.32	\$3.49	\$3.68	\$109.34
DTE Energy Company	DTE	\$3.95	\$4.16	\$4.37	\$4.60	\$4.96	\$5.35	\$5.76	\$6.19	\$6.64	\$7.10	\$7.59	\$7.99	\$8.42	\$8.87	\$9.34	\$244.67
El Paso Electric Company	EE	\$1.60	\$1.70	\$1.81	\$1.93	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.14	\$3.31	\$106.27
Evergy, Inc.	EVERG	\$1.87	\$1.99	\$2.12	\$2.25	\$2.45	\$2.64	\$2.85	\$3.05	\$3.24	\$3.44	\$3.63	\$3.82	\$4.02	\$4.23	\$4.46	\$120.86
Hawaiian Electric Industries, Inc.	HE	\$1.12	\$1.19	\$1.27	\$1.35	\$1.45	\$1.54	\$1.64	\$1.75	\$1.86	\$1.98	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$77.41
NextEra Energy, Inc.	NEE	\$4.48	\$4.89	\$5.35	\$5.84	\$6.38	\$6.93	\$7.51	\$8.09	\$8.68	\$9.28	\$9.87	\$10.40	\$10.95	\$11.53	\$12.14	\$380.19
NorthWestern Corporation	NWE	\$2.28	\$2.38	\$2.48	\$2.58	\$2.63	\$2.70	\$2.78	\$2.87	\$2.98	\$3.11	\$3.26	\$3.43	\$3.61	\$3.80	\$4.01	\$126.76
OGE Energy Corp.	OGE	\$1.52	\$1.61	\$1.70	\$1.79	\$1.87	\$1.95	\$2.04	\$2.12	\$2.21	\$2.30	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$82.72
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$105.63
Pinnacle West Capital Corporation	PNW	\$3.02	\$3.17	\$3.33	\$3.49	\$3.69	\$3.91	\$4.14	\$4.39	\$4.65	\$4.93	\$5.24	\$5.52	\$5.81	\$6.12	\$6.44	\$181.94
PNM Resources, Inc.	PNM	\$1.07	\$1.13	\$1.19	\$1.25	\$1.38	\$1.51	\$1.66	\$1.82	\$1.99	\$2.17	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$91.44
Portland General Electric Company	POR	\$1.49	\$1.59	\$1.69	\$1.79	\$1.87	\$1.96	\$2.06	\$2.16	\$2.28	\$2.40	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$97.47
Southern Company	SO	\$2.67	\$2.70	\$2.72	\$2.75	\$2.79	\$2.85	\$2.92	\$3.00	\$3.09	\$3.19	\$3.31	\$3.48	\$3.67	\$3.86	\$4.07	\$92.96
Wisconsin Energy Corporation	WEC	\$2.34	\$2.44	\$2.54	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74	\$148.84
Xcel Energy Inc.	XEL	\$1.58	\$1.69	\$1.81	\$1.94	\$2.07	\$2.20	\$2.34	\$2.49	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$107.76

Projected Annual Data			[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows																			
		Initial																	
Company	Ticker	Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33	
ALLETE, Inc.	ALE	(\$75.79)	\$0.00	\$1.98	\$2.32	\$2.49	\$2.61	\$2.73	\$2.86	\$2.99	\$3.14	\$3.30	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$161.42	
Alliant Energy Corporation	LNT	(\$43.38)	\$0.00	\$1.24	\$1.47	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.27	\$2.40	\$2.55	\$2.69	\$2.83	\$2.98	\$3.14	\$94.70	
Ameren Corporation	AEE	(\$67.71)	\$0.00	\$1.62	\$1.92	\$2.16	\$2.33	\$2.54	\$2.76	\$2.99	\$3.23	\$3.47	\$3.72	\$3.97	\$4.19	\$4.41	\$4.64	\$150.36	
American Electric Power Company, Inc.	AEP	(\$77.09)	\$0.00	\$2.39	\$2.80	\$2.94	\$3.05	\$3.22	\$3.40	\$3.58	\$3.78	\$3.98	\$4.20	\$4.43	\$4.67	\$4.91	\$5.18	\$165.29	
Avangrid, Inc.	AGR	(\$49.45)	\$0.00	\$1.24	\$1.48	\$1.66	\$1.80	\$1.97	\$2.15	\$2.32	\$2.49	\$2.65	\$2.81	\$2.95	\$3.10	\$3.27	\$3.44	\$108.84	
Black Hills Corporation	BKH	(\$66.04)	\$0.00	\$1.93	\$2.27	\$2.39	\$2.48	\$2.67	\$2.87	\$3.08	\$3.31	\$3.55	\$3.82	\$4.09	\$4.31	\$4.54	\$4.78	\$145.51	
CMS Energy Corporation	CMS	(\$51.15)	\$0.00	\$1.30	\$1.54	\$1.68	\$1.78	\$1.93	\$2.09	\$2.26	\$2.43	\$2.61	\$2.80	\$2.99	\$3.15	\$3.32	\$3.49	\$113.02	
DTE Energy Company	DTE	(\$114.83)	\$0.00	\$3.45	\$4.08	\$4.37	\$4.60	\$4.96	\$5.35	\$5.76	\$6.19	\$6.64	\$7.10	\$7.59	\$7.99	\$8.42	\$8.87	\$254.01	
El Paso Electric Company	EE	(\$51.24)	\$0.00	\$1.40	\$1.64	\$1.81	\$1.93	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.14	\$109.58	
Eversource, Inc.	EVERG	(\$57.06)	\$0.00	\$1.64	\$1.95	\$2.12	\$2.25	\$2.45	\$2.64	\$2.85	\$3.05	\$3.24	\$3.44	\$3.63	\$3.82	\$4.02	\$4.23	\$125.32	
Hawaiian Electric Industries, Inc.	HE	(\$36.69)	\$0.00	\$0.98	\$1.16	\$1.27	\$1.35	\$1.45	\$1.54	\$1.64	\$1.75	\$1.86	\$1.98	\$2.10	\$2.21	\$2.33	\$2.45	\$79.99	
NextEra Energy, Inc.	NEE	(\$177.20)	\$0.00	\$3.91	\$4.66	\$5.35	\$5.84	\$6.38	\$6.93	\$7.51	\$8.09	\$8.68	\$9.28	\$9.87	\$10.40	\$10.95	\$11.53	\$392.33	
NorthWestern Corporation	NWE	(\$62.50)	\$0.00	\$2.00	\$2.31	\$2.48	\$2.58	\$2.63	\$2.70	\$2.78	\$2.87	\$2.98	\$3.11	\$3.26	\$3.43	\$3.61	\$3.80	\$130.77	
OGE Energy Corp.	OGE	(\$40.48)	\$0.00	\$1.33	\$1.56	\$1.70	\$1.79	\$1.87	\$1.95	\$2.04	\$2.12	\$2.21	\$2.30	\$2.40	\$2.53	\$2.66	\$2.80	\$85.67	
Otter Tail Corporation	OTTR	(\$48.31)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$109.37	
Pinnacle West Capital Corporation	PNW	(\$86.95)	\$0.00	\$2.64	\$3.10	\$3.33	\$3.49	\$3.69	\$3.91	\$4.14	\$4.39	\$4.65	\$4.93	\$5.24	\$5.52	\$5.81	\$6.12	\$188.38	
PNM Resources, Inc.	PNM	(\$41.99)	\$0.00	\$0.93	\$1.10	\$1.19	\$1.25	\$1.38	\$1.51	\$1.66	\$1.82	\$1.99	\$2.17	\$2.37	\$2.49	\$2.62	\$2.76	\$94.35	
Portland General Electric Company	POR	(\$46.89)	\$0.00	\$1.30	\$1.52	\$1.69	\$1.79	\$1.87	\$1.96	\$2.06	\$2.16	\$2.28	\$2.40	\$2.54	\$2.67	\$2.81	\$2.96	\$100.59	
Southern Company	SO	(\$47.59)	\$0.00	\$2.33	\$2.71	\$2.72	\$2.75	\$2.79	\$2.85	\$2.92	\$3.00	\$3.09	\$3.19	\$3.31	\$3.48	\$3.67	\$3.86	\$97.03	
Wisconsin Energy Corporation	WEC	(\$71.63)	\$0.00	\$2.04	\$2.40	\$2.54	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$153.58	
Xcel Energy Inc.	XEL	(\$51.14)	\$0.00	\$1.38	\$1.62	\$1.81	\$1.94	\$2.07	\$2.20	\$2.34	\$2.49	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$111.41	

Multi-Stage Growth Discounted Cash Flow Model
30 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EPS Growth Rate Estimates			Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal					
				Value	High													
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	PEG Ratio				
ALLETE, Inc.	ALE	\$75.79	NA	6.00%	3.50%	6.00%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.63%	21.97	4.13				
Alliant Energy Corporation	LNT	\$43.38	6.00%	7.25%	6.50%	7.25%	5.32%	63.00%	64.00%	65.57%	\$0.00	9.32%	18.17	3.42				
Ameren Corporation	AEE	\$67.71	6.80%	7.70%	7.50%	7.70%	5.32%	58.00%	59.00%	65.57%	\$0.00	8.95%	20.01	3.76				
American Electric Power Company, Inc.	AEP	\$77.09	5.80%	5.74%	4.50%	5.80%	5.32%	68.00%	65.00%	65.57%	\$0.00	9.03%	19.58	3.68				
Avangrid, Inc.	AGR	\$49.45	8.70%	9.20%	12.00%	12.00%	5.32%	70.00%	67.00%	65.57%	\$0.00	9.50%	17.40	3.27				
Black Hills Corporation	BKH	\$66.05	4.70%	4.46%	6.50%	6.50%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.46%	17.55	3.30				
CMS Energy Corporation	CMS	\$51.15	6.40%	7.09%	7.00%	7.09%	5.32%	60.00%	59.00%	65.57%	\$0.00	8.93%	20.13	3.79				
DTE Energy Company	DTE	\$114.83	6.00%	5.49%	7.50%	7.50%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.69%	16.65	3.13				
El Paso Electric Company	EE	\$51.25	4.40%	5.10%	3.00%	5.10%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.84%	20.66	3.89				
Evergy, Inc.	EVRG	\$57.06	7.80%	9.20%	NMF	9.20%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.38%	17.92	3.37				
Hawaiian Electric Industries, Inc.	HE	\$36.69	6.40%	7.80%	3.50%	7.80%	5.32%	61.00%	62.00%	65.57%	\$0.00	9.35%	18.04	3.39				
NextEra Energy, Inc.	NEE	\$177.20	7.70%	7.45%	9.00%	9.00%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.92%	20.20	3.80				
NorthWestern Corporation	NWE	\$62.50	2.60%	2.59%	2.50%	2.60%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.66%	21.78	4.10				
OGE Energy Corp.	OGE	\$40.48	5.20%	NA	6.00%	6.00%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.19%	18.79	3.53				
Otter Tail Corporation	OTTR	\$48.31	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.05%	19.48	3.66				
Pinnacle West Capital Corporation	PNW	\$86.95	4.60%	4.16%	6.00%	6.00%	5.32%	62.00%	62.00%	65.57%	\$0.00	9.36%	18.01	3.39				
PNM Resources, Inc.	PNM	\$41.99	4.70%	4.10%	7.50%	7.50%	5.32%	50.00%	50.00%	65.57%	\$0.00	9.21%	18.71	3.52				
Portland General Electric Company	POR	\$46.90	3.30%	5.05%	4.00%	5.05%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.93%	20.11	3.78				
Southern Company	SO	\$47.59	4.50%	1.68%	3.50%	4.50%	5.32%	78.00%	73.00%	65.57%	\$0.00	10.39%	14.35	2.70				
Wisconsin Energy Corporation	WEC	\$71.63	4.40%	4.70%	7.00%	7.00%	5.32%	67.00%	65.00%	65.57%	(\$0.00)	9.10%	19.24	3.62				
Xcel Energy Inc.	XEL	\$51.14	5.90%	6.64%	5.50%	6.64%	5.32%	61.00%	63.00%	65.57%	\$0.00	9.06%	19.45	3.66				
											Mean	9.19%						
											Max	10.39%						
											Min	8.63%						
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	\$3.13	\$3.32	\$3.52	\$3.73	\$3.95	\$4.19	\$4.44	\$4.70	\$4.97	\$5.25	\$5.55	\$5.85	\$6.16	\$6.49	\$6.83	\$7.19	\$7.58
Alliant Energy Corporation	LNT	\$1.99	\$2.13	\$2.29	\$2.45	\$2.63	\$2.82	\$3.03	\$3.24	\$3.45	\$3.67	\$3.89	\$4.11	\$4.33	\$4.56	\$4.80	\$5.05	\$5.32
Ameren Corporation	AEE	\$2.77	\$2.98	\$3.21	\$3.46	\$3.73	\$4.01	\$4.32	\$4.64	\$4.96	\$5.28	\$5.60	\$5.92	\$6.24	\$6.57	\$6.92	\$7.29	\$7.68
American Electric Power Company, Inc.	AEP	\$3.62	\$3.83	\$4.05	\$4.29	\$4.54	\$4.80	\$5.08	\$5.37	\$5.67	\$5.99	\$6.31	\$6.65	\$7.01	\$7.38	\$7.77	\$8.19	\$8.62
Avangrid, Inc.	AGR	\$1.67	\$1.87	\$2.09	\$2.35	\$2.63	\$2.94	\$3.30	\$3.66	\$4.01	\$4.36	\$4.69	\$4.99	\$5.26	\$5.54	\$5.83	\$6.14	\$6.47
Black Hills Corporation	BKH	\$3.38	\$3.60	\$3.83	\$4.08	\$4.35	\$4.63	\$4.93	\$5.24	\$5.56	\$5.89	\$6.23	\$6.57	\$6.92	\$7.29	\$7.68	\$8.08	\$8.51
CMS Energy Corporation	CMS	\$2.17	\$2.32	\$2.49	\$2.67	\$2.85	\$3.06	\$3.27	\$3.50	\$3.72	\$3.95	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.44	\$5.73
DTE Energy Company	DTE	\$5.73	\$6.16	\$6.62	\$7.12	\$7.65	\$8.23	\$8.84	\$9.47	\$10.12	\$10.76	\$11.41	\$12.06	\$12.70	\$13.38	\$14.09	\$14.84	\$15.63
El Paso Electric Company	EE	\$2.42	\$2.54	\$2.67	\$2.81	\$2.95	\$3.10	\$3.26	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45
Evergy, Inc.	EVRG	NA	\$2.50	\$2.73	\$2.98	\$3.26	\$3.55	\$3.88	\$4.21	\$4.55	\$4.88	\$5.20	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78	\$7.14
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.77	\$1.91	\$2.05	\$2.21	\$2.39	\$2.57	\$2.76	\$2.96	\$3.15	\$3.34	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58
NextEra Energy, Inc.	NEE	\$6.50	\$7.09	\$7.72	\$8.42	\$9.18	\$10.00	\$10.90	\$11.82	\$12.73	\$13.65	\$14.54	\$15.40	\$16.22	\$17.08	\$17.99	\$18.95	\$19.96
NorthWestern Corporation	NWE	\$3.34	\$3.43	\$3.52	\$3.61	\$3.70	\$3.80	\$3.90	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.98	\$5.25	\$5.53	\$5.82	\$6.13
OGE Energy Corp.	OGE	\$1.92	\$2.04	\$2.16	\$2.29	\$2.42	\$2.57	\$2.72	\$2.88	\$3.05	\$3.22	\$3.40	\$3.59	\$3.78	\$3.98	\$4.19	\$4.41	\$4.65
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.70	\$4.98	\$5.28	\$5.59	\$5.93	\$6.28	\$6.65	\$7.04	\$7.44	\$7.85	\$8.27	\$8.72	\$9.18	\$9.67	\$10.18	\$10.72
PNM Resources, Inc.	PNM	\$1.92	\$2.06	\$2.22	\$2.39	\$2.56	\$2.76	\$2.96	\$3.17	\$3.39	\$3.61	\$3.82	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.24
Portland General Electric Company	POR	\$2.29	\$2.41	\$2.53	\$2.65	\$2.79	\$2.93	\$3.08	\$3.23	\$3.40	\$3.58	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.87	\$5.13
Southern Company	SO	\$3.21	\$3.35	\$3.51	\$3.66	\$3.83	\$4.00	\$4.18	\$4.37	\$4.58	\$4.81	\$5.05	\$5.31	\$5.59	\$5.89	\$6.21	\$6.54	\$6.88
Wisconsin Energy Corporation	WEC	\$3.14	\$3.36	\$3.59	\$3.85	\$4.12	\$4.40	\$4.71	\$5.03	\$5.35	\$5.68	\$6.02	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$8.23
Xcel Energy Inc.	XEL	\$2.30	\$2.45	\$2.62	\$2.79	\$2.97	\$3.17	\$3.38	\$3.60	\$3.82	\$4.05	\$4.28	\$4.52	\$4.76	\$5.02	\$5.28	\$5.56	\$5.86

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.46	\$2.61	\$2.76	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$4.25	\$4.48	\$4.72	\$4.97	\$158.03
Alliant Energy Corporation	LNT	\$1.44	\$1.55	\$1.68	\$1.81	\$1.95	\$2.09	\$2.23	\$2.38	\$2.53	\$2.68	\$2.84	\$2.99	\$3.15	\$3.31	\$3.49	\$91.84
Ameren Corporation	AEE	\$1.86	\$2.02	\$2.19	\$2.37	\$2.59	\$2.82	\$3.07	\$3.31	\$3.57	\$3.83	\$4.09	\$4.31	\$4.54	\$4.78	\$5.03	\$145.87
American Electric Power Company, Inc.	AEP	\$2.76	\$2.87	\$2.99	\$3.12	\$3.30	\$3.50	\$3.70	\$3.91	\$4.13	\$4.36	\$4.60	\$4.84	\$5.10	\$5.37	\$5.65	\$160.31
Avangrid, Inc.	AGR	\$1.47	\$1.62	\$1.79	\$1.97	\$2.20	\$2.43	\$2.66	\$2.89	\$3.09	\$3.28	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24	\$106.83
Black Hills Corporation	BKH	\$2.26	\$2.38	\$2.51	\$2.64	\$2.87	\$3.12	\$3.38	\$3.65	\$3.93	\$4.23	\$4.54	\$4.78	\$5.03	\$5.30	\$5.58	\$141.92
CMS Energy Corporation	CMS	\$1.49	\$1.59	\$1.69	\$1.80	\$1.96	\$2.13	\$2.30	\$2.48	\$2.67	\$2.86	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$109.54
DTE Energy Company	DTE	\$4.04	\$4.29	\$4.57	\$4.85	\$5.30	\$5.77	\$6.25	\$6.75	\$7.27	\$7.80	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25	\$247.07
El Paso Electric Company	EE	\$1.63	\$1.75	\$1.88	\$2.02	\$2.12	\$2.23	\$2.35	\$2.48	\$2.61	\$2.75	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$106.87
Evergy, Inc.	EVRG	\$1.88	\$2.02	\$2.16	\$2.31	\$2.53	\$2.75	\$2.97	\$3.19	\$3.40	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68	\$121.49
Hawaiian Electric Industries, Inc.	HE	\$1.16	\$1.26	\$1.37	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$78.49
NextEra Energy, Inc.	NEE	\$4.56	\$5.02	\$5.54	\$6.10	\$6.72	\$7.36	\$8.02	\$8.68	\$9.34	\$10.00	\$10.64	\$11.20	\$11.80	\$12.42	\$13.08	\$382.79
NorthWestern Corporation	NWE	\$2.29	\$2.38	\$2.48	\$2.58	\$2.64	\$2.70	\$2.78	\$2.88	\$2.99	\$3.12	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$126.78
OGE Energy Corp.	OGE	\$1.53	\$1.62	\$1.72	\$1.82	\$1.91	\$2.00	\$2.09	\$2.19	\$2.28	\$2.38	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$82.93
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$105.63
Pinnacle West Capital Corporation	PNW	\$3.09	\$3.27	\$3.47	\$3.68	\$3.93	\$4.19	\$4.47	\$4.76	\$5.07	\$5.38	\$5.71	\$6.02	\$6.34	\$6.68	\$7.03	\$183.37
PNM Resources, Inc.	PNM	\$1.11	\$1.19	\$1.28	\$1.38	\$1.55	\$1.73	\$1.92	\$2.12	\$2.34	\$2.56	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$93.03
Portland General Electric Company	POR	\$1.52	\$1.63	\$1.75	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.45	\$2.59	\$2.74	\$2.88	\$3.04	\$3.20	\$3.37	\$98.05
Southern Company	SO	\$2.73	\$2.80	\$2.86	\$2.92	\$3.01	\$3.10	\$3.20	\$3.31	\$3.42	\$3.54	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$93.75
Wisconsin Energy Corporation	WEC	\$2.41	\$2.55	\$2.70	\$2.86	\$3.07	\$3.28	\$3.49	\$3.71	\$3.94	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$150.42
Xcel Energy Inc.	XEL	\$1.60	\$1.72	\$1.85	\$2.00	\$2.14	\$2.29	\$2.45	\$2.61	\$2.78	\$2.95	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84	\$108.23

Projected Annual Data			[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows																			
Company	Ticker	Initial Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33	
ALLETE, Inc.	ALE	(\$75.79)	\$0.00	\$2.03	\$2.39	\$2.61	\$2.76	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$4.25	\$4.48	\$4.72	\$163.00	
Alliant Energy Corporation	LNT	(\$43.38)	\$0.00	\$1.26	\$1.49	\$1.68	\$1.81	\$1.95	\$2.09	\$2.23	\$2.38	\$2.53	\$2.68	\$2.84	\$2.99	\$3.15	\$3.31	\$95.33	
Ameren Corporation	AEE	(\$67.71)	\$0.00	\$1.63	\$1.94	\$2.19	\$2.37	\$2.59	\$2.82	\$3.07	\$3.31	\$3.57	\$3.83	\$4.09	\$4.31	\$4.54	\$4.78	\$150.90	
American Electric Power Company, Inc.	AEP	(\$77.09)	\$0.00	\$2.41	\$2.84	\$2.99	\$3.12	\$3.30	\$3.50	\$3.70	\$3.91	\$4.13	\$4.36	\$4.60	\$4.84	\$5.10	\$5.37	\$165.96	
Avangrid, Inc.	AGR	(\$49.44)	\$0.00	\$1.28	\$1.55	\$1.79	\$1.97	\$2.20	\$2.43	\$2.66	\$2.89	\$3.09	\$3.28	\$3.45	\$3.63	\$3.82	\$4.03	\$111.07	
Black Hills Corporation	BKH	(\$66.04)	\$0.00	\$1.98	\$2.34	\$2.51	\$2.64	\$2.87	\$3.12	\$3.38	\$3.65	\$3.93	\$4.23	\$4.54	\$4.78	\$5.03	\$5.30	\$147.51	
CMS Energy Corporation	CMS	(\$51.15)	\$0.00	\$1.30	\$1.55	\$1.69	\$1.80	\$1.96	\$2.13	\$2.30	\$2.48	\$2.67	\$2.86	\$3.05	\$3.22	\$3.39	\$3.57	\$113.30	
DTE Energy Company	DTE	(\$114.83)	\$0.00	\$3.53	\$4.19	\$4.57	\$4.85	\$5.30	\$5.77	\$6.25	\$6.75	\$7.27	\$7.80	\$8.33	\$8.77	\$9.24	\$9.73	\$257.32	
El Paso Electric Company	EE	(\$51.24)	\$0.00	\$1.43	\$1.67	\$1.88	\$2.02	\$2.12	\$2.23	\$2.35	\$2.48	\$2.61	\$2.75	\$2.90	\$3.06	\$3.22	\$3.39	\$110.44	
Evergy, Inc.	EVRG	(\$57.06)	\$0.00	\$1.65	\$1.97	\$2.16	\$2.31	\$2.53	\$2.75	\$2.97	\$3.19	\$3.40	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$126.18	
Hawaiian Electric Industries, Inc.	HE	(\$36.69)	\$0.00	\$1.02	\$1.21	\$1.37	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.57	\$2.71	\$2.85	\$81.50	
NextEra Energy, Inc.	NEE	(\$177.20)	\$0.00	\$3.98	\$4.76	\$5.54	\$6.10	\$6.72	\$7.36	\$8.02	\$8.68	\$9.34	\$10.00	\$10.64	\$11.20	\$11.80	\$12.42	\$395.87	
NorthWestern Corporation	NWE	(\$62.50)	\$0.00	\$2.00	\$2.32	\$2.48	\$2.58	\$2.64	\$2.70	\$2.78	\$2.88	\$2.99	\$3.12	\$3.27	\$3.44	\$3.62	\$3.82	\$130.80	
OGE Energy Corp.	OGE	(\$40.48)	\$0.00	\$1.34	\$1.58	\$1.72	\$1.82	\$1.91	\$2.00	\$2.09	\$2.19	\$2.28	\$2.38	\$2.48	\$2.61	\$2.75	\$2.89	\$85.97	
Otter Tail Corporation	OTTR	(\$48.31)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$109.37	
Pinnacle West Capital Corporation	PNW	(\$86.95)	\$0.00	\$2.70	\$3.18	\$3.47	\$3.68	\$3.93	\$4.19	\$4.47	\$4.76	\$5.07	\$5.38	\$5.71	\$6.02	\$6.34	\$6.68	\$190.40	
PNM Resources, Inc.	PNM	(\$41.98)	\$0.00	\$0.97	\$1.15	\$1.28	\$1.38	\$1.55	\$1.73	\$1.92	\$2.12	\$2.34	\$2.56	\$2.79	\$2.94	\$3.10	\$3.26	\$96.46	
Portland General Electric Company	POR	(\$46.89)	\$0.00	\$1.33	\$1.55	\$1.75	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.45	\$2.59	\$2.74	\$2.88	\$3.04	\$3.20	\$101.41	
Southern Company	SO	(\$47.59)	\$0.00	\$2.39	\$2.80	\$2.86	\$2.92	\$3.01	\$3.10	\$3.20	\$3.31	\$3.42	\$3.54	\$3.67	\$3.86	\$4.07	\$4.29	\$98.26	
Wisconsin Energy Corporation	WEC	(\$71.63)	\$0.00	\$2.11	\$2.49	\$2.70	\$2.86	\$3.07	\$3.28	\$3.49	\$3.71	\$3.94	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$155.82	
Xcel Energy Inc.	CEL	(\$51.14)	\$0.00	\$1.39	\$1.65	\$1.85	\$2.00	\$2.14	\$2.29	\$2.45	\$2.61	\$2.78	\$2.95	\$3.12	\$3.29	\$3.46	\$3.65	\$112.07	

Multi-Stage Growth Discounted Cash Flow Model
30 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EPS Growth Rate Estimates			Value	Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal				
					Line	Low								PEG				
Company	Ticker	Price	Zacks	First Call		Growth	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio				
ALLETE, Inc.	ALE	\$75.79	NA	6.00%	3.50%	3.50%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.06%	25.22	4.74				
Alliant Energy Corporation	LNT	\$43.38	6.00%	7.25%	6.50%	6.00%	5.32%	63.00%	64.00%	65.57%	\$0.00	8.97%	18.90	3.55				
Ameren Corporation	AEE	\$67.71	6.80%	7.70%	7.50%	6.80%	5.32%	58.00%	59.00%	65.57%	\$0.00	8.72%	20.28	3.81				
American Electric Power Company, Inc.	AEP	\$77.09	5.80%	5.74%	4.50%	4.50%	5.32%	68.00%	65.00%	65.57%	\$0.00	8.69%	20.49	3.85				
Avangrid, Inc.	AGR	\$49.45	8.70%	9.20%	12.00%	8.70%	5.32%	70.00%	67.00%	65.57%	\$0.00	8.63%	20.84	3.92				
Black Hills Corporation	BKH	\$66.05	4.70%	4.46%	6.50%	4.46%	5.32%	59.00%	57.00%	65.57%	\$0.00	8.89%	19.34	3.64				
CMS Energy Corporation	CMS	\$51.15	6.40%	7.09%	7.00%	6.40%	5.32%	60.00%	59.00%	65.57%	\$0.00	8.75%	20.10	3.78				
DTE Energy Company	DTE	\$114.83	6.00%	5.49%	7.50%	5.49%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.10%	18.26	3.43				
El Paso Electric Company	EE	\$51.25	4.40%	5.10%	3.00%	3.00%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.32%	23.01	4.33				
Evergy, Inc.	EVRG	\$57.06	7.80%	9.20%	NMF	7.80%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.04%	18.56	3.49				
Hawaiian Electric Industries, Inc.	HE	\$36.69	6.40%	7.80%	3.50%	3.50%	5.32%	61.00%	62.00%	65.57%	\$0.00	8.25%	23.54	4.43				
NextEra Energy, Inc.	NEE	\$177.20	7.70%	7.45%	9.00%	7.45%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.54%	21.44	4.03				
NorthWestern Corporation	NWE	\$62.50	2.60%	2.59%	2.50%	2.50%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.63%	20.85	3.92				
OGE Energy Corp.	OGE	\$40.48	5.20%	NA	6.00%	5.20%	5.32%	71.00%	71.00%	65.57%	\$0.00	8.96%	18.94	3.56				
Otter Tail Corporation	OTTR	\$48.31	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.05%	18.50	3.48				
Pinnacle West Capital Corporation	PNW	\$86.95	4.60%	4.16%	6.00%	4.16%	5.32%	62.00%	62.00%	65.57%	\$0.00	8.84%	19.59	3.68				
PNM Resources, Inc.	PNM	\$41.99	4.70%	4.10%	7.50%	4.10%	5.32%	50.00%	50.00%	65.57%	\$0.00	8.36%	22.72	4.27				
Portland General Electric Company	POR	\$46.90	3.30%	5.05%	4.00%	3.30%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.49%	21.79	4.10				
Southern Company	SO	\$47.59	4.50%	1.68%	3.50%	1.68%	5.32%	78.00%	73.00%	65.57%	\$0.00	9.41%	16.88	3.17				
Wisconsin Energy Corporation	WEC	\$71.63	4.40%	4.70%	7.00%	4.40%	5.32%	67.00%	65.00%	65.57%	\$0.00	8.43%	22.17	4.17				
Xcel Energy Inc.	XEL	\$51.14	5.90%	6.64%	5.50%	5.50%	5.32%	61.00%	63.00%	65.57%	\$0.00	8.76%	20.08	3.78				
											Mean	8.71%						
											Max	9.41%						
											Min	8.06%						
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	\$3.13	\$3.24	\$3.35	\$3.47	\$3.59	\$3.72	\$3.85	\$3.99	\$4.16	\$4.34	\$4.55	\$4.77	\$5.03	\$5.29	\$5.58	\$5.87	\$6.19
Alliant Energy Corporation	LNT	\$1.99	\$2.11	\$2.24	\$2.37	\$2.51	\$2.66	\$2.82	\$2.99	\$3.16	\$3.34	\$3.53	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82
Ameren Corporation	AEE	\$2.77	\$2.96	\$3.16	\$3.37	\$3.60	\$3.85	\$4.11	\$4.38	\$4.66	\$4.94	\$5.23	\$5.52	\$5.81	\$6.12	\$6.44	\$6.79	\$7.15
American Electric Power Company, Inc.	AEP	\$3.62	\$3.78	\$3.95	\$4.13	\$4.32	\$4.51	\$4.71	\$4.93	\$5.17	\$5.42	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76
Avangrid, Inc.	AGR	\$1.67	\$1.82	\$1.97	\$2.14	\$2.33	\$2.53	\$2.75	\$2.98	\$3.20	\$3.43	\$3.65	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01
Black Hills Corporation	BKH	\$3.38	\$3.53	\$3.69	\$3.85	\$4.02	\$4.20	\$4.39	\$4.59	\$4.81	\$5.05	\$5.30	\$5.58	\$5.87	\$6.18	\$6.51	\$6.86	\$7.22
CMS Energy Corporation	CMS	\$2.17	\$2.31	\$2.46	\$2.61	\$2.78	\$2.96	\$3.15	\$3.34	\$3.55	\$3.75	\$3.97	\$4.19	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42
DTE Energy Company	DTE	\$5.73	\$6.04	\$6.38	\$6.73	\$7.10	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25	\$9.75	\$10.27	\$10.82	\$11.39	\$12.00	\$12.64	\$13.31
El Paso Electric Company	EE	\$2.42	\$2.49	\$2.57	\$2.64	\$2.72	\$2.81	\$2.89	\$2.99	\$3.10	\$3.23	\$3.38	\$3.54	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59
Evergy, Inc.	EVRG	NA	\$2.50	\$2.70	\$2.91	\$3.13	\$3.38	\$3.64	\$3.91	\$4.18	\$4.45	\$4.73	\$5.00	\$5.27	\$5.55	\$5.84	\$6.15	\$6.48
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.70	\$1.76	\$1.82	\$1.88	\$1.95	\$2.02	\$2.09	\$2.18	\$2.27	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24
NextEra Energy, Inc.	NEE	\$6.50	\$6.98	\$7.50	\$8.06	\$8.66	\$9.31	\$10.00	\$10.71	\$11.44	\$12.17	\$12.90	\$13.63	\$14.36	\$15.12	\$15.92	\$16.77	\$17.66
NorthWestern Corporation	NWE	\$3.34	\$3.42	\$3.51	\$3.60	\$3.69	\$3.78	\$3.87	\$3.99	\$4.13	\$4.29	\$4.47	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08
OGE Energy Corp.	OGE	\$1.92	\$2.02	\$2.12	\$2.24	\$2.35	\$2.47	\$2.60	\$2.74	\$2.88	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.93	\$4.14	\$4.36
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.61	\$4.81	\$5.01	\$5.21	\$5.43	\$5.66	\$5.90	\$6.17	\$6.46	\$6.78	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24
PNM Resources, Inc.	PNM	\$1.92	\$2.00	\$2.08	\$2.17	\$2.25	\$2.35	\$2.44	\$2.55	\$2.66	\$2.79	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98
Portland General Electric Company	POR	\$2.29	\$2.37	\$2.44	\$2.52	\$2.61	\$2.69	\$2.78	\$2.88	\$3.00	\$3.13	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23	\$4.45
Southern Company	SO	\$3.21	\$3.26	\$3.32	\$3.37	\$3.43	\$3.49	\$3.55	\$3.63	\$3.73	\$3.86	\$4.02	\$4.21	\$4.44	\$4.67	\$4.92	\$5.18	\$5.46
Wisconsin Energy Corporation	WEC	\$3.14	\$3.28	\$3.42	\$3.57	\$3.73	\$3.89	\$4.07	\$4.25	\$4.45	\$4.67	\$4.90	\$5.15	\$5.43	\$5.72	\$6.02	\$6.34	\$6.68
Xcel Energy Inc.	XEL	\$2.30	\$2.43	\$2.56	\$2.70	\$2.85	\$3.01	\$3.17	\$3.34	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.21	\$2.29	\$2.37	\$2.45	\$2.54	\$2.63	\$2.74	\$2.85	\$2.99	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$4.06	\$155.97
Alliant Energy Corporation	LNT	\$1.41	\$1.50	\$1.60	\$1.70	\$1.81	\$1.93	\$2.04	\$2.17	\$2.30	\$2.43	\$2.57	\$2.70	\$2.85	\$3.00	\$3.16	\$91.02
Ameren Corporation	AEE	\$1.83	\$1.97	\$2.11	\$2.27	\$2.46	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.81	\$4.01	\$4.23	\$4.45	\$4.69	\$144.92
American Electric Power Company, Inc.	AEP	\$2.69	\$2.77	\$2.85	\$2.93	\$3.07	\$3.21	\$3.37	\$3.54	\$3.73	\$3.92	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$159.02
Avangrid, Inc.	AGR	\$1.38	\$1.48	\$1.59	\$1.70	\$1.84	\$1.98	\$2.13	\$2.27	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.28	\$104.34
Black Hills Corporation	BKH	\$2.18	\$2.25	\$2.32	\$2.40	\$2.56	\$2.73	\$2.92	\$3.12	\$3.35	\$3.59	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74	\$139.69
CMS Energy Corporation	CMS	\$1.47	\$1.56	\$1.65	\$1.75	\$1.89	\$2.04	\$2.19	\$2.36	\$2.53	\$2.71	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$109.00
DTE Energy Company	DTE	\$3.89	\$4.06	\$4.23	\$4.42	\$4.73	\$5.07	\$5.43	\$5.81	\$6.21	\$6.64	\$7.09	\$7.47	\$7.87	\$8.29	\$8.73	\$243.10
El Paso Electric Company	EE	\$1.57	\$1.65	\$1.73	\$1.82	\$1.88	\$1.95	\$2.02	\$2.11	\$2.21	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$105.60
Evergy, Inc.	EVRG	\$1.86	\$1.97	\$2.08	\$2.19	\$2.37	\$2.55	\$2.73	\$2.91	\$3.09	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$120.26
Hawaiian Electric Industries, Inc.	HE	\$1.07	\$1.12	\$1.16	\$1.21	\$1.26	\$1.32	\$1.38	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.92	\$2.02	\$2.13	\$76.30
NextEra Energy, Inc.	NEE	\$4.43	\$4.81	\$5.23	\$5.68	\$6.17	\$6.67	\$7.20	\$7.74	\$8.29	\$8.85	\$9.41	\$9.91	\$10.44	\$11.00	\$11.58	\$378.66
NorthWestern Corporation	NWE	\$2.28	\$2.37	\$2.47	\$2.57	\$2.62	\$2.68	\$2.76	\$2.86	\$2.97	\$3.09	\$3.24	\$3.41	\$3.59	\$3.78	\$3.99	\$126.72
OGE Energy Corp.	OGE	\$1.51	\$1.59	\$1.67	\$1.76	\$1.83	\$1.90	\$1.98	\$2.06	\$2.14	\$2.23	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$82.53
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$105.63
Pinnacle West Capital Corporation	PNW	\$2.98	\$3.10	\$3.23	\$3.37	\$3.54	\$3.72	\$3.92	\$4.14	\$4.38	\$4.64	\$4.92	\$5.19	\$5.46	\$5.75	\$6.06	\$181.02
PNM Resources, Inc.	PNM	\$1.04	\$1.08	\$1.13	\$1.17	\$1.28	\$1.39	\$1.51	\$1.64	\$1.79	\$1.95	\$2.12	\$2.24	\$2.36	\$2.48	\$2.61	\$90.55
Portland General Electric Company	POR	\$1.47	\$1.55	\$1.63	\$1.72	\$1.79	\$1.86	\$1.94	\$2.03	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$2.92	\$97.01
Southern Company	SO	\$2.59	\$2.58	\$2.56	\$2.55	\$2.55	\$2.57	\$2.61	\$2.66	\$2.72	\$2.81	\$2.91	\$3.06	\$3.23	\$3.40	\$3.58	\$92.15
Wisconsin Energy Corporation	WEC	\$2.29	\$2.37	\$2.45	\$2.53	\$2.65	\$2.77	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$148.03
Xcel Energy Inc.	XEL	\$1.56	\$1.67	\$1.78	\$1.89	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.85	\$3.00	\$3.16	\$3.33	\$3.51	\$107.39

Projected Annual Data		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows		Initial																
Company	Ticker	Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	(\$75.79)	\$0.00	\$1.93	\$2.25	\$2.37	\$2.45	\$2.54	\$2.63	\$2.74	\$2.85	\$2.99	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$160.03
Alliant Energy Corporation	LNT	(\$43.38)	\$0.00	\$1.23	\$1.45	\$1.60	\$1.70	\$1.81	\$1.93	\$2.04	\$2.17	\$2.30	\$2.43	\$2.57	\$2.70	\$2.85	\$3.00	\$94.18
Ameren Corporation	AEE	(\$67.71)	\$0.00	\$1.60	\$1.89	\$2.11	\$2.27	\$2.46	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.81	\$4.01	\$4.23	\$4.45	\$149.60
American Electric Power Company, Inc.	AEP	(\$77.09)	\$0.00	\$2.35	\$2.75	\$2.85	\$2.93	\$3.07	\$3.21	\$3.37	\$3.54	\$3.73	\$3.92	\$4.14	\$4.36	\$4.59	\$4.83	\$164.11
Avangrid, Inc.	AGR	(\$49.45)	\$0.00	\$1.21	\$1.44	\$1.59	\$1.70	\$1.84	\$1.98	\$2.13	\$2.27	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$107.62
Black Hills Corporation	BKH	(\$66.04)	\$0.00	\$1.90	\$2.22	\$2.32	\$2.40	\$2.56	\$2.73	\$2.92	\$3.12	\$3.35	\$3.59	\$3.85	\$4.05	\$4.27	\$4.50	\$144.43
CMS Energy Corporation	CMS	(\$51.15)	\$0.00	\$1.29	\$1.52	\$1.65	\$1.75	\$1.89	\$2.04	\$2.19	\$2.36	\$2.53	\$2.71	\$2.89	\$3.04	\$3.21	\$3.38	\$112.56
DTE Energy Company	DTE	(\$114.83)	\$0.00	\$3.40	\$4.00	\$4.23	\$4.42	\$4.73	\$5.07	\$5.43	\$5.81	\$6.21	\$6.64	\$7.09	\$7.47	\$7.87	\$8.29	\$251.83
El Paso Electric Company	EE	(\$51.24)	\$0.00	\$1.37	\$1.59	\$1.73	\$1.82	\$1.88	\$1.95	\$2.02	\$2.11	\$2.21	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$108.61
Evergy, Inc.	EVRG	(\$57.06)	\$0.00	\$1.63	\$1.93	\$2.08	\$2.19	\$2.37	\$2.55	\$2.73	\$2.91	\$3.09	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$124.51
Hawaiian Electric Industries, Inc.	HE	(\$36.69)	\$0.00	\$0.94	\$1.09	\$1.16	\$1.21	\$1.26	\$1.32	\$1.38	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.92	\$2.02	\$78.43
NextEra Energy, Inc.	NEE	(\$177.20)	\$0.00	\$3.87	\$4.59	\$5.23	\$5.68	\$6.17	\$6.67	\$7.20	\$7.74	\$8.29	\$8.85	\$9.41	\$9.91	\$10.44	\$11.00	\$390.24
NorthWestern Corporation	NWE	(\$62.50)	\$0.00	\$1.99	\$2.31	\$2.47	\$2.57	\$2.62	\$2.68	\$2.76	\$2.86	\$2.97	\$3.09	\$3.24	\$3.41	\$3.59	\$3.78	\$130.70
OGE Energy Corp.	OGE	(\$40.48)	\$0.00	\$1.32	\$1.55	\$1.67	\$1.76	\$1.83	\$1.90	\$1.98	\$2.06	\$2.14	\$2.23	\$2.32	\$2.45	\$2.58	\$2.71	\$85.39
Otter Tail Corporation	OTTR	(\$48.31)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$109.37
Pinnacle West Capital Corporation	PNW	(\$86.95)	\$0.00	\$2.60	\$3.04	\$3.23	\$3.37	\$3.54	\$3.72	\$3.92	\$4.14	\$4.38	\$4.64	\$4.92	\$5.19	\$5.46	\$5.75	\$187.08
PNM Resources, Inc.	PNM	(\$41.99)	\$0.00	\$0.91	\$1.06	\$1.13	\$1.17	\$1.28	\$1.39	\$1.51	\$1.64	\$1.79	\$1.95	\$2.12	\$2.24	\$2.36	\$2.48	\$93.16
Portland General Electric Company	POR	(\$46.89)	\$0.00	\$1.28	\$1.49	\$1.63	\$1.72	\$1.79	\$1.86	\$1.94	\$2.03	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$99.93
Southern Company	SO	(\$47.59)	\$0.00	\$2.26	\$2.61	\$2.56	\$2.55	\$2.55	\$2.57	\$2.61	\$2.66	\$2.72	\$2.81	\$2.91	\$3.06	\$3.23	\$3.40	\$95.73
Wisconsin Energy Corporation	WEC	(\$71.63)	\$0.00	\$2.00	\$2.34	\$2.45	\$2.53	\$2.65	\$2.77	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	\$3.95	\$4.16	\$152.41
Xcel Energy Inc.	XEL	(\$51.14)	\$0.00	\$1.36	\$1.60	\$1.78	\$1.89	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.85	\$3.00	\$3.16	\$3.33	\$110.90

Multi-Stage Growth Discounted Cash Flow Model
90 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution	Terminal	Terminal					
					Value									PEG				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio				
ALLETE, Inc.	ALE	\$76.90	NA	6.00%	3.50%	4.75%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.29%	23.25	4.37				
Alliant Energy Corporation	LNT	\$43.76	6.00%	7.25%	6.50%	6.58%	5.32%	63.00%	64.00%	65.57%	\$0.00	9.10%	18.27	3.44				
Ameren Corporation	AEE	\$67.10	6.80%	7.70%	7.50%	7.33%	5.32%	58.00%	59.00%	65.57%	\$0.00	8.89%	19.34	3.64				
American Electric Power Company, Inc.	AEP	\$75.90	5.80%	5.74%	4.50%	5.35%	5.32%	68.00%	65.00%	65.57%	\$0.00	8.97%	18.93	3.56				
Avangrid, Inc.	AGR	\$49.34	8.70%	9.20%	12.00%	9.97%	5.32%	70.00%	67.00%	65.57%	\$0.00	8.95%	18.99	3.57				
Black Hills Corporation	BKH	\$64.12	4.70%	4.46%	6.50%	5.22%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.21%	17.76	3.34				
CMS Energy Corporation	CMS	\$50.75	6.40%	7.09%	7.00%	6.83%	5.32%	60.00%	59.00%	65.57%	\$0.00	8.89%	19.33	3.64				
DTE Energy Company	DTE	\$114.88	6.00%	5.49%	7.50%	6.33%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.34%	17.19	3.23				
El Paso Electric Company	EE	\$54.34	4.40%	5.10%	3.00%	4.17%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.41%	22.33	4.20				
Evergy, Inc.	EVRG	\$57.59	7.80%	9.20%	NMF	8.50%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.17%	17.94	3.37				
Hawaiian Electric Industries, Inc.	HE	\$37.01	6.40%	7.80%	3.50%	5.90%	5.32%	61.00%	62.00%	65.57%	\$0.00	8.80%	19.83	3.73				
NextEra Energy, Inc.	NEE	\$175.87	7.70%	7.45%	9.00%	8.05%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.71%	20.38	3.83				
NorthWestern Corporation	NWE	\$61.78	2.60%	2.59%	2.50%	2.56%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.69%	20.49	3.85				
OGE Energy Corp.	OGE	\$39.18	5.20%	NA	6.00%	5.60%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.20%	17.78	3.34				
Otter Tail Corporation	OTTR	\$47.95	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.08%	18.36	3.45				
Pinnacle West Capital Corporation	PNW	\$86.69	4.60%	4.16%	6.00%	4.92%	5.32%	62.00%	62.00%	65.57%	\$0.00	9.06%	18.46	3.47				
PNM Resources, Inc.	PNM	\$41.40	4.70%	4.10%	7.50%	5.43%	5.32%	50.00%	50.00%	65.57%	\$0.00	8.72%	20.32	3.82				
Portland General Electric Company	POR	\$46.88	3.30%	5.05%	4.00%	4.12%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.69%	20.47	3.85				
Southern Company	SO	\$46.26	4.50%	1.68%	3.50%	3.23%	5.32%	78.00%	73.00%	65.57%	\$0.00	10.07%	14.54	2.73				
Wisconsin Energy Corporation	WEC	\$70.80	4.40%	4.70%	7.00%	5.37%	5.32%	67.00%	65.00%	65.57%	(\$0.00)	8.71%	20.36	3.83				
Xcel Energy Inc.	XEL	\$50.58	5.90%	6.64%	5.50%	6.01%	5.32%	61.00%	63.00%	65.57%	\$0.00	8.93%	19.12	3.60				
											Mean	8.95%						
											Max	10.07%						
											Min	8.29%						
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	\$3.13	\$3.28	\$3.43	\$3.60	\$3.77	\$3.95	\$4.13	\$4.34	\$4.55	\$4.78	\$5.02	\$5.29	\$5.57	\$5.86	\$6.17	\$6.50	\$6.85
Alliant Energy Corporation	LNT	\$1.99	\$2.12	\$2.26	\$2.41	\$2.57	\$2.74	\$2.92	\$3.10	\$3.29	\$3.49	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05
Ameren Corporation	AEE	\$2.77	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.24	\$4.53	\$4.83	\$5.14	\$5.45	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.46
American Electric Power Company, Inc.	AEP	\$3.62	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.95	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.49	\$7.89	\$8.31
Avangrid, Inc.	AGR	\$1.67	\$1.84	\$2.02	\$2.22	\$2.44	\$2.69	\$2.95	\$3.22	\$3.50	\$3.76	\$4.02	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$5.53
Black Hills Corporation	BKH	\$3.38	\$3.56	\$3.74	\$3.94	\$4.14	\$4.36	\$4.59	\$4.83	\$5.08	\$5.35	\$5.63	\$5.93	\$6.24	\$6.58	\$6.93	\$7.29	\$7.68
CMS Energy Corporation	CMS	\$2.17	\$2.32	\$2.48	\$2.65	\$2.83	\$3.02	\$3.23	\$3.44	\$3.66	\$3.88	\$4.10	\$4.33	\$4.56	\$4.80	\$5.06	\$5.33	\$5.61
DTE Energy Company	DTE	\$5.73	\$6.09	\$6.48	\$6.89	\$7.32	\$7.79	\$8.28	\$8.79	\$9.32	\$9.86	\$10.42	\$10.99	\$11.57	\$12.19	\$12.84	\$13.52	\$14.24
El Paso Electric Company	EE	\$2.42	\$2.52	\$2.63	\$2.74	\$2.85	\$2.97	\$3.09	\$3.23	\$3.37	\$3.53	\$3.71	\$3.90	\$4.10	\$4.32	\$4.55	\$4.80	\$5.05
Evergy, Inc.	EVRG	NA	\$2.50	\$2.71	\$2.94	\$3.19	\$3.46	\$3.76	\$4.06	\$4.36	\$4.66	\$4.96	\$5.25	\$5.53	\$5.82	\$6.13	\$6.46	\$6.80
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.74	\$1.84	\$1.95	\$2.06	\$2.18	\$2.31	\$2.45	\$2.59	\$2.73	\$2.88	\$3.04	\$3.20	\$3.37	\$3.55	\$3.74	\$3.94
NextEra Energy, Inc.	NEE	\$6.50	\$7.02	\$7.59	\$8.20	\$8.86	\$9.57	\$10.34	\$11.13	\$11.92	\$12.72	\$13.51	\$14.29	\$15.05	\$15.85	\$16.70	\$17.58	\$18.52
NorthWestern Corporation	NWE	\$3.34	\$3.43	\$3.51	\$3.60	\$3.70	\$3.79	\$3.89	\$4.01	\$4.14	\$4.31	\$4.50	\$4.72	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11
OGE Energy Corp.	OGE	\$1.92	\$2.03	\$2.14	\$2.26	\$2.39	\$2.52	\$2.66	\$2.81	\$2.97	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$4.06	\$4.27	\$4.50
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.65	\$4.88	\$5.12	\$5.37	\$5.63	\$5.91	\$6.20	\$6.52	\$6.85	\$7.21	\$7.59	\$7.99	\$8.41	\$8.86	\$9.33	\$9.83
PNM Resources, Inc.	PNM	\$1.92	\$2.02	\$2.13	\$2.25	\$2.37	\$2.50	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.00	\$4.22	\$4.44
Portland General Electric Company	POR	\$2.29	\$2.38	\$2.48	\$2.58	\$2.69	\$2.80	\$2.92	\$3.04	\$3.18	\$3.33	\$3.49	\$3.67	\$3.87	\$4.07	\$4.29	\$4.52	\$4.76
Southern Company	SO	\$3.21	\$3.31	\$3.42	\$3.53	\$3.64	\$3.76	\$3.88	\$4.02	\$4.18	\$4.36	\$4.56	\$4.79	\$5.04	\$5.31	\$5.59	\$5.89	\$6.20
Wisconsin Energy Corporation	WEC	\$3.14	\$3.31	\$3.49	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.86	\$7.22
Xcel Energy Inc.	XEL	\$2.30	\$2.44	\$2.58	\$2.74	\$2.91	\$3.08	\$3.27	\$3.46	\$3.66	\$3.86	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$5.29	\$5.57

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.27	\$2.37	\$2.49	\$2.61	\$2.73	\$2.86	\$2.99	\$3.14	\$3.30	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$4.49	\$159.27
Alliant Energy Corporation	LNT	\$1.42	\$1.53	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.27	\$2.40	\$2.55	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$92.19
Ameren Corporation	AEE	\$1.85	\$2.00	\$2.16	\$2.33	\$2.54	\$2.76	\$2.99	\$3.23	\$3.47	\$3.72	\$3.97	\$4.19	\$4.41	\$4.64	\$4.89	\$144.18
American Electric Power Company, Inc.	AEP	\$2.73	\$2.84	\$2.94	\$3.05	\$3.22	\$3.40	\$3.58	\$3.78	\$3.98	\$4.20	\$4.43	\$4.67	\$4.91	\$5.18	\$5.45	\$157.32
Avangrid, Inc.	AGR	\$1.41	\$1.53	\$1.66	\$1.80	\$1.97	\$2.15	\$2.32	\$2.49	\$2.65	\$2.81	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$104.99
Black Hills Corporation	BKH	\$2.21	\$2.30	\$2.39	\$2.48	\$2.67	\$2.87	\$3.08	\$3.31	\$3.55	\$3.82	\$4.09	\$4.31	\$4.54	\$4.78	\$5.04	\$136.41
CMS Energy Corporation	CMS	\$1.49	\$1.58	\$1.68	\$1.78	\$1.93	\$2.09	\$2.26	\$2.43	\$2.61	\$2.80	\$2.99	\$3.15	\$3.32	\$3.49	\$3.68	\$108.50
DTE Energy Company	DTE	\$3.95	\$4.16	\$4.37	\$4.60	\$4.96	\$5.35	\$5.76	\$6.19	\$6.64	\$7.10	\$7.59	\$7.99	\$8.42	\$8.87	\$9.34	\$244.79
El Paso Electric Company	EE	\$1.60	\$1.70	\$1.81	\$1.93	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.14	\$3.31	\$112.78
Evergy, Inc.	EVRG	\$1.87	\$1.99	\$2.12	\$2.25	\$2.45	\$2.64	\$2.85	\$3.05	\$3.24	\$3.44	\$3.63	\$3.82	\$4.02	\$4.23	\$4.46	\$121.99
Hawaiian Electric Industries, Inc.	HE	\$1.12	\$1.19	\$1.27	\$1.35	\$1.45	\$1.54	\$1.64	\$1.75	\$1.86	\$1.98	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$78.08
NextEra Energy, Inc.	NEE	\$4.48	\$4.89	\$5.35	\$5.84	\$6.38	\$6.93	\$7.51	\$8.09	\$8.68	\$9.28	\$9.87	\$10.40	\$10.95	\$11.53	\$12.14	\$377.39
NorthWestern Corporation	NWE	\$2.28	\$2.38	\$2.48	\$2.58	\$2.63	\$2.70	\$2.78	\$2.87	\$2.98	\$3.11	\$3.26	\$3.43	\$3.61	\$3.80	\$4.01	\$125.24
OGE Energy Corp.	OGE	\$1.52	\$1.61	\$1.70	\$1.79	\$1.87	\$1.95	\$2.04	\$2.12	\$2.21	\$2.30	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$80.00
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$104.85
Pinnacle West Capital Corporation	PNW	\$3.02	\$3.17	\$3.33	\$3.49	\$3.69	\$3.91	\$4.14	\$4.39	\$4.65	\$4.93	\$5.24	\$5.52	\$5.81	\$6.12	\$6.44	\$181.40
PNM Resources, Inc.	PNM	\$1.07	\$1.13	\$1.19	\$1.25	\$1.38	\$1.51	\$1.66	\$1.82	\$1.99	\$2.17	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$90.20
Portland General Electric Company	POR	\$1.49	\$1.59	\$1.69	\$1.79	\$1.87	\$1.96	\$2.06	\$2.16	\$2.28	\$2.40	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$97.44
Southern Company	SO	\$2.67	\$2.70	\$2.72	\$2.75	\$2.79	\$2.85	\$2.92	\$3.00	\$3.09	\$3.19	\$3.31	\$3.48	\$3.67	\$3.86	\$4.07	\$90.19
Wisconsin Energy Corporation	WEC	\$2.34	\$2.44	\$2.54	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74	\$147.08
Xcel Energy Inc.	XEL	\$1.58	\$1.69	\$1.81	\$1.94	\$2.07	\$2.20	\$2.34	\$2.49	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$106.57

Projected Annual Data		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows		Initial																
Company	Ticker	Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	(\$76.90)	\$0.00	\$1.98	\$2.32	\$2.49	\$2.61	\$2.73	\$2.86	\$2.99	\$3.14	\$3.30	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$163.76
Alliant Energy Corporation	LNT	(\$43.76)	\$0.00	\$1.24	\$1.47	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.27	\$2.40	\$2.55	\$2.69	\$2.83	\$2.98	\$3.14	\$95.50
Ameren Corporation	AEE	(\$67.10)	\$0.00	\$1.62	\$1.92	\$2.16	\$2.33	\$2.54	\$2.76	\$2.99	\$3.23	\$3.47	\$3.72	\$3.97	\$4.19	\$4.41	\$4.64	\$149.07
American Electric Power Company, Inc.	AEP	(\$75.90)	\$0.00	\$2.39	\$2.80	\$2.94	\$3.05	\$3.22	\$3.40	\$3.58	\$3.78	\$3.98	\$4.20	\$4.43	\$4.67	\$4.91	\$5.18	\$162.78
Avangrid, Inc.	AGR	(\$49.34)	\$0.00	\$1.24	\$1.48	\$1.66	\$1.80	\$1.97	\$2.15	\$2.32	\$2.49	\$2.65	\$2.81	\$2.95	\$3.10	\$3.27	\$3.44	\$108.62
Black Hills Corporation	BKH	(\$64.12)	\$0.00	\$1.93	\$2.27	\$2.39	\$2.48	\$2.67	\$2.87	\$3.08	\$3.31	\$3.55	\$3.82	\$4.09	\$4.31	\$4.54	\$4.78	\$141.45
CMS Energy Corporation	CMS	(\$50.75)	\$0.00	\$1.30	\$1.54	\$1.68	\$1.78	\$1.93	\$2.09	\$2.26	\$2.43	\$2.61	\$2.80	\$2.99	\$3.15	\$3.32	\$3.49	\$112.18
DTE Energy Company	DTE	(\$114.88)	\$0.00	\$3.45	\$4.08	\$4.37	\$4.60	\$4.96	\$5.35	\$5.76	\$6.19	\$6.64	\$7.10	\$7.59	\$7.99	\$8.42	\$8.87	\$254.13
El Paso Electric Company	EE	(\$54.34)	\$0.00	\$1.40	\$1.64	\$1.81	\$1.93	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.14	\$116.10
Evergy, Inc.	EVRG	(\$57.59)	\$0.00	\$1.64	\$1.95	\$2.12	\$2.25	\$2.45	\$2.64	\$2.85	\$3.05	\$3.24	\$3.44	\$3.63	\$3.82	\$4.02	\$4.23	\$126.45
Hawaiian Electric Industries, Inc.	HE	(\$37.01)	\$0.00	\$0.98	\$1.16	\$1.27	\$1.35	\$1.45	\$1.54	\$1.64	\$1.75	\$1.86	\$1.98	\$2.10	\$2.21	\$2.33	\$2.45	\$80.66
NextEra Energy, Inc.	NEE	(\$175.87)	\$0.00	\$3.91	\$4.66	\$5.35	\$5.84	\$6.38	\$6.93	\$7.51	\$8.09	\$8.68	\$9.28	\$9.87	\$10.40	\$10.95	\$11.53	\$389.53
NorthWestern Corporation	NWE	(\$61.78)	\$0.00	\$2.00	\$2.31	\$2.48	\$2.58	\$2.63	\$2.70	\$2.78	\$2.87	\$2.98	\$3.11	\$3.26	\$3.43	\$3.61	\$3.80	\$129.24
OGE Energy Corp.	OGE	(\$39.18)	\$0.00	\$1.33	\$1.56	\$1.70	\$1.79	\$1.87	\$1.95	\$2.04	\$2.12	\$2.21	\$2.30	\$2.40	\$2.53	\$2.66	\$2.80	\$82.95
Otter Tail Corporation	OTTR	(\$47.94)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$108.59
Pinnacle West Capital Corporation	PNW	(\$86.69)	\$0.00	\$2.64	\$3.10	\$3.33	\$3.49	\$3.69	\$3.91	\$4.14	\$4.39	\$4.65	\$4.93	\$5.24	\$5.52	\$5.81	\$6.12	\$187.85
PNM Resources, Inc.	PNM	(\$41.40)	\$0.00	\$0.93	\$1.10	\$1.19	\$1.25	\$1.38	\$1.51	\$1.66	\$1.82	\$1.99	\$2.17	\$2.37	\$2.49	\$2.62	\$2.76	\$93.11
Portland General Electric Company	POR	(\$46.88)	\$0.00	\$1.30	\$1.52	\$1.69	\$1.79	\$1.87	\$1.96	\$2.06	\$2.16	\$2.28	\$2.40	\$2.54	\$2.67	\$2.81	\$2.96	\$100.56
Southern Company	SO	(\$46.26)	\$0.00	\$2.33	\$2.71	\$2.72	\$2.75	\$2.79	\$2.85	\$2.92	\$3.00	\$3.09	\$3.19	\$3.31	\$3.48	\$3.67	\$3.86	\$94.26
Wisconsin Energy Corporation	WEC	(\$70.80)	\$0.00	\$2.04	\$2.40	\$2.54	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$151.82
Xcel Energy Inc.	XEL	(\$50.58)	\$0.00	\$1.38	\$1.62	\$1.81	\$1.94	\$2.07	\$2.20	\$2.34	\$2.49	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$110.23

Multi-Stage Growth Discounted Cash Flow Model
90 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]						
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal PEG						
					Value	High														
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio						
ALLETE, Inc.	ALE	\$76.90	NA	6.00%	3.50%	6.00%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.58%	21.17	3.98						
Alliant Energy Corporation	LNT	\$43.76	6.00%	7.25%	6.50%	7.25%	5.32%	63.00%	64.00%	65.57%	\$0.00	9.29%	17.41	3.27						
Ameren Corporation	AEE	\$67.10	6.80%	7.70%	7.50%	7.70%	5.32%	58.00%	59.00%	65.57%	\$0.00	8.98%	18.83	3.54						
American Electric Power Company, Inc.	AEP	\$75.90	5.80%	5.74%	4.50%	5.80%	5.32%	68.00%	65.00%	65.57%	\$0.00	9.09%	18.30	3.44						
Avangrid, Inc.	AGR	\$49.34	8.70%	9.20%	12.00%	12.00%	5.32%	70.00%	67.00%	65.57%	\$0.00	9.51%	16.49	3.10						
Black Hills Corporation	BKH	\$64.12	4.70%	4.46%	6.50%	6.50%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.58%	16.19	3.04						
CMS Energy Corporation	CMS	\$50.75	6.40%	7.09%	7.00%	7.09%	5.32%	60.00%	59.00%	65.57%	\$0.00	8.96%	18.97	3.57						
DTE Energy Company	DTE	\$114.88	6.00%	5.49%	7.50%	7.50%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.68%	15.81	2.97						
El Paso Electric Company	EE	\$54.34	4.40%	5.10%	3.00%	5.10%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.64%	20.81	3.91						
Evergy, Inc.	EVRG	\$57.59	7.80%	9.20%	NMF	9.20%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.34%	17.18	3.23						
Hawaiian Electric Industries, Inc.	HE	\$37.01	6.40%	7.80%	3.50%	7.80%	5.32%	61.00%	62.00%	65.57%	\$0.00	9.31%	17.28	3.25						
NextEra Energy, Inc.	NEE	\$175.87	7.70%	7.45%	9.00%	9.00%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.94%	19.04	3.58						
NorthWestern Corporation	NWE	\$61.78	2.60%	2.59%	2.50%	2.60%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.70%	20.44	3.84						
OGE Energy Corp.	OGE	\$39.18	5.20%	NA	6.00%	6.00%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.32%	17.26	3.25						
Otter Tail Corporation	OTTR	\$47.95	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.08%	18.36	3.45						
Pinnacle West Capital Corporation	PNW	\$86.69	4.60%	4.16%	6.00%	6.00%	5.32%	62.00%	62.00%	65.57%	\$0.00	9.37%	17.05	3.21						
PNM Resources, Inc.	PNM	\$41.40	4.70%	4.10%	7.50%	7.50%	5.32%	50.00%	50.00%	65.57%	\$0.00	9.26%	17.52	3.30						
Portland General Electric Company	POR	\$46.88	3.30%	5.05%	4.00%	5.05%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.94%	19.09	3.59						
Southern Company	SO	\$46.26	4.50%	1.68%	3.50%	4.50%	5.32%	78.00%	73.00%	65.57%	\$0.00	10.54%	13.22	2.49						
Wisconsin Energy Corporation	WEC	\$70.80	4.40%	4.70%	7.00%	7.00%	5.32%	67.00%	65.00%	65.57%	(\$0.00)	9.14%	18.06	3.40						
Xcel Energy Inc.	XEL	\$50.58	5.90%	6.64%	5.50%	6.64%	5.32%	61.00%	63.00%	65.57%	\$0.00	9.10%	18.27	3.44						
											Mean	9.21%								
											Max	10.54%								
											Min	8.58%								
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]		
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
ALLETE, Inc.	ALE	\$3.13	\$3.32	\$3.52	\$3.73	\$3.95	\$4.19	\$4.44	\$4.70	\$4.97	\$5.25	\$5.55	\$5.85	\$6.16	\$6.49	\$6.83	\$7.19	\$7.58		
Alliant Energy Corporation	LNT	\$1.99	\$2.13	\$2.29	\$2.45	\$2.63	\$2.82	\$3.03	\$3.24	\$3.45	\$3.67	\$3.89	\$4.11	\$4.33	\$4.56	\$4.80	\$5.05	\$5.32		
Ameren Corporation	AEE	\$2.77	\$2.98	\$3.21	\$3.46	\$3.73	\$4.01	\$4.32	\$4.64	\$4.96	\$5.28	\$5.60	\$5.92	\$6.24	\$6.57	\$6.92	\$7.29	\$7.68		
American Electric Power Company, Inc.	AEP	\$3.62	\$3.83	\$4.05	\$4.29	\$4.54	\$4.80	\$5.08	\$5.37	\$5.67	\$5.99	\$6.31	\$6.65	\$7.01	\$7.38	\$7.77	\$8.19	\$8.62		
Avangrid, Inc.	AGR	\$1.67	\$1.87	\$2.09	\$2.35	\$2.63	\$2.94	\$3.30	\$3.66	\$4.01	\$4.36	\$4.69	\$4.99	\$5.26	\$5.54	\$5.83	\$6.14	\$6.47		
Black Hills Corporation	BKH	\$3.38	\$3.60	\$3.83	\$4.08	\$4.35	\$4.63	\$4.93	\$5.24	\$5.56	\$5.89	\$6.23	\$6.57	\$6.92	\$7.29	\$7.68	\$8.08	\$8.51		
CMS Energy Corporation	CMS	\$2.17	\$2.32	\$2.49	\$2.67	\$2.85	\$3.06	\$3.27	\$3.50	\$3.72	\$3.95	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.44	\$5.73		
DTE Energy Company	DTE	\$5.73	\$6.16	\$6.62	\$7.12	\$7.65	\$8.23	\$8.84	\$9.47	\$10.12	\$10.76	\$11.41	\$12.06	\$12.70	\$13.38	\$14.09	\$14.84	\$15.63		
El Paso Electric Company	EE	\$2.42	\$2.54	\$2.67	\$2.81	\$2.95	\$3.10	\$3.26	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45		
Evergy, Inc.	EVRG	NA	\$2.50	\$2.73	\$2.98	\$3.26	\$3.55	\$3.88	\$4.21	\$4.55	\$4.88	\$5.20	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78	\$7.14		
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.77	\$1.91	\$2.05	\$2.21	\$2.39	\$2.57	\$2.76	\$2.96	\$3.15	\$3.34	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58		
NextEra Energy, Inc.	NEE	\$6.50	\$7.09	\$7.72	\$8.42	\$9.18	\$10.00	\$10.90	\$11.82	\$12.73	\$13.65	\$14.54	\$15.40	\$16.22	\$17.08	\$17.99	\$18.95	\$19.96		
NorthWestern Corporation	NWE	\$3.34	\$3.43	\$3.52	\$3.61	\$3.70	\$3.80	\$3.90	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.98	\$5.25	\$5.53	\$5.82	\$6.13		
OGE Energy Corp.	OGE	\$1.92	\$2.04	\$2.16	\$2.29	\$2.42	\$2.57	\$2.72	\$2.88	\$3.05	\$3.22	\$3.40	\$3.59	\$3.78	\$3.98	\$4.19	\$4.41	\$4.65		
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71		
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.70	\$4.98	\$5.28	\$5.59	\$5.93	\$6.28	\$6.65	\$7.04	\$7.44	\$7.85	\$8.27	\$8.72	\$9.18	\$9.67	\$10.18	\$10.72		
PNM Resources, Inc.	PNM	\$1.92	\$2.06	\$2.22	\$2.39	\$2.56	\$2.76	\$2.96	\$3.17	\$3.39	\$3.61	\$3.82	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.24		
Portland General Electric Company	POR	\$2.29	\$2.41	\$2.53	\$2.65	\$2.79	\$2.93	\$3.08	\$3.23	\$3.40	\$3.58	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.87	\$5.13		
Southern Company	SO	\$3.21	\$3.35	\$3.51	\$3.66	\$3.83	\$4.00	\$4.18	\$4.37	\$4.58	\$4.81	\$5.05	\$5.31	\$5.59	\$5.89	\$6.21	\$6.54	\$6.88		
Wisconsin Energy Corporation	WEC	\$3.14	\$3.36	\$3.59	\$3.85	\$4.12	\$4.40	\$4.71	\$5.03	\$5.35	\$5.68	\$6.02	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$8.23		
Xcel Energy Inc.	XEL	\$2.30	\$2.45	\$2.62	\$2.79	\$2.97	\$3.17	\$3.38	\$3.60	\$3.82	\$4.05	\$4.28	\$4.52	\$4.76	\$5.02	\$5.28	\$5.56	\$5.86		

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.46	\$2.61	\$2.76	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$4.25	\$4.48	\$4.72	\$4.97	\$160.37
Alliant Energy Corporation	LNT	\$1.44	\$1.55	\$1.68	\$1.81	\$1.95	\$2.09	\$2.23	\$2.38	\$2.53	\$2.68	\$2.84	\$2.99	\$3.15	\$3.31	\$3.49	\$92.64
Ameren Corporation	AEE	\$1.86	\$2.02	\$2.19	\$2.37	\$2.59	\$2.82	\$3.07	\$3.31	\$3.57	\$3.83	\$4.09	\$4.31	\$4.54	\$4.78	\$5.03	\$144.58
American Electric Power Company, Inc.	AEP	\$2.76	\$2.87	\$2.99	\$3.12	\$3.30	\$3.50	\$3.70	\$3.91	\$4.13	\$4.36	\$4.60	\$4.84	\$5.10	\$5.37	\$5.65	\$157.79
Avangrid, Inc.	AGR	\$1.47	\$1.62	\$1.79	\$1.97	\$2.20	\$2.43	\$2.66	\$2.89	\$3.09	\$3.28	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24	\$106.61
Black Hills Corporation	BKH	\$2.26	\$2.38	\$2.51	\$2.64	\$2.87	\$3.12	\$3.38	\$3.65	\$3.93	\$4.23	\$4.54	\$4.78	\$5.03	\$5.30	\$5.58	\$137.85
CMS Energy Corporation	CMS	\$1.49	\$1.59	\$1.69	\$1.80	\$1.96	\$2.13	\$2.30	\$2.48	\$2.67	\$2.86	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$108.71
DTE Energy Company	DTE	\$4.04	\$4.29	\$4.57	\$4.85	\$5.30	\$5.77	\$6.25	\$6.75	\$7.27	\$7.80	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25	\$247.19
El Paso Electric Company	EE	\$1.63	\$1.75	\$1.88	\$2.02	\$2.12	\$2.23	\$2.35	\$2.48	\$2.61	\$2.75	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$113.39
Evergy, Inc.	EVRG	\$1.88	\$2.02	\$2.16	\$2.31	\$2.53	\$2.75	\$2.97	\$3.19	\$3.40	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68	\$122.63
Hawaiian Electric Industries, Inc.	HE	\$1.16	\$1.26	\$1.37	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$79.16
NextEra Energy, Inc.	NEE	\$4.56	\$5.02	\$5.54	\$6.10	\$6.72	\$7.36	\$8.02	\$8.68	\$9.34	\$10.00	\$10.64	\$11.20	\$11.80	\$12.42	\$13.08	\$379.99
NorthWestern Corporation	NWE	\$2.29	\$2.38	\$2.48	\$2.58	\$2.64	\$2.70	\$2.78	\$2.88	\$2.99	\$3.12	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$125.26
OGE Energy Corp.	OGE	\$1.53	\$1.62	\$1.72	\$1.82	\$1.91	\$2.00	\$2.09	\$2.19	\$2.28	\$2.38	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$80.20
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$104.85
Pinnacle West Capital Corporation	PNW	\$3.09	\$3.27	\$3.47	\$3.68	\$3.93	\$4.19	\$4.47	\$4.76	\$5.07	\$5.38	\$5.71	\$6.02	\$6.34	\$6.68	\$7.03	\$182.83
PNM Resources, Inc.	PNM	\$1.11	\$1.19	\$1.28	\$1.38	\$1.55	\$1.73	\$1.92	\$2.12	\$2.34	\$2.56	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$91.78
Portland General Electric Company	POR	\$1.52	\$1.63	\$1.75	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.45	\$2.59	\$2.74	\$2.88	\$3.04	\$3.20	\$3.37	\$98.01
Southern Company	SO	\$2.73	\$2.80	\$2.86	\$2.92	\$3.01	\$3.10	\$3.20	\$3.31	\$3.42	\$3.54	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$90.98
Wisconsin Energy Corporation	WEC	\$2.41	\$2.55	\$2.70	\$2.86	\$3.07	\$3.28	\$3.49	\$3.71	\$3.94	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$148.65
Xcel Energy Inc.	XEL	\$1.60	\$1.72	\$1.85	\$2.00	\$2.14	\$2.29	\$2.45	\$2.61	\$2.78	\$2.95	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84	\$107.04

Projected Annual Data		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows		Initial																
Company	Ticker	Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	(\$76.90)	\$0.00	\$2.03	\$2.39	\$2.61	\$2.76	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$4.25	\$4.48	\$4.72	\$165.34
Alliant Energy Corporation	LNT	(\$43.76)	\$0.00	\$1.26	\$1.49	\$1.68	\$1.81	\$1.95	\$2.09	\$2.23	\$2.38	\$2.53	\$2.68	\$2.84	\$2.99	\$3.15	\$3.31	\$96.13
Ameren Corporation	AEE	(\$67.10)	\$0.00	\$1.63	\$1.94	\$2.19	\$2.37	\$2.59	\$2.82	\$3.07	\$3.31	\$3.57	\$3.83	\$4.09	\$4.31	\$4.54	\$4.78	\$149.61
American Electric Power Company, Inc.	AEP	(\$75.90)	\$0.00	\$2.41	\$2.84	\$2.99	\$3.12	\$3.30	\$3.50	\$3.70	\$3.91	\$4.13	\$4.36	\$4.60	\$4.84	\$5.10	\$5.37	\$163.45
Avangrid, Inc.	AGR	(\$49.34)	\$0.00	\$1.28	\$1.55	\$1.79	\$1.97	\$2.20	\$2.43	\$2.66	\$2.89	\$3.09	\$3.28	\$3.45	\$3.63	\$3.82	\$4.03	\$110.85
Black Hills Corporation	BKH	(\$64.12)	\$0.00	\$1.98	\$2.34	\$2.51	\$2.64	\$2.87	\$3.12	\$3.38	\$3.65	\$3.93	\$4.23	\$4.54	\$4.78	\$5.03	\$5.30	\$143.43
CMS Energy Corporation	CMS	(\$50.75)	\$0.00	\$1.30	\$1.55	\$1.69	\$1.80	\$1.96	\$2.13	\$2.30	\$2.48	\$2.67	\$2.86	\$3.05	\$3.22	\$3.39	\$3.57	\$112.47
DTE Energy Company	DTE	(\$114.88)	\$0.00	\$3.53	\$4.19	\$4.57	\$4.85	\$5.30	\$5.77	\$6.25	\$6.75	\$7.27	\$7.80	\$8.33	\$8.77	\$9.24	\$9.73	\$257.44
El Paso Electric Company	EE	(\$54.34)	\$0.00	\$1.43	\$1.67	\$1.88	\$2.02	\$2.12	\$2.23	\$2.35	\$2.48	\$2.61	\$2.75	\$2.90	\$3.06	\$3.22	\$3.39	\$116.96
Evergy, Inc.	EVRG	(\$57.59)	\$0.00	\$1.65	\$1.97	\$2.16	\$2.31	\$2.53	\$2.75	\$2.97	\$3.19	\$3.40	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$127.31
Hawaiian Electric Industries, Inc.	HE	(\$37.01)	\$0.00	\$1.02	\$1.21	\$1.37	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.57	\$2.71	\$2.85	\$82.17
NextEra Energy, Inc.	NEE	(\$175.87)	\$0.00	\$3.98	\$4.76	\$5.54	\$6.10	\$6.72	\$7.36	\$8.02	\$8.68	\$9.34	\$10.00	\$10.64	\$11.20	\$11.80	\$12.42	\$393.07
NorthWestern Corporation	NWE	(\$61.78)	\$0.00	\$2.00	\$2.32	\$2.48	\$2.58	\$2.64	\$2.70	\$2.78	\$2.88	\$2.99	\$3.12	\$3.27	\$3.44	\$3.62	\$3.82	\$129.28
OGE Energy Corp.	OGE	(\$39.18)	\$0.00	\$1.34	\$1.58	\$1.72	\$1.82	\$1.91	\$2.00	\$2.09	\$2.19	\$2.28	\$2.38	\$2.48	\$2.61	\$2.75	\$2.89	\$83.25
Otter Tail Corporation	OTTR	(\$47.94)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$108.59
Pinnacle West Capital Corporation	PNW	(\$86.69)	\$0.00	\$2.70	\$3.18	\$3.47	\$3.68	\$3.93	\$4.19	\$4.47	\$4.76	\$5.07	\$5.38	\$5.71	\$6.02	\$6.34	\$6.68	\$189.86
PNM Resources, Inc.	PNM	(\$41.40)	\$0.00	\$0.97	\$1.15	\$1.28	\$1.38	\$1.55	\$1.73	\$1.92	\$2.12	\$2.34	\$2.56	\$2.79	\$2.94	\$3.10	\$3.26	\$95.22
Portland General Electric Company	POR	(\$46.88)	\$0.00	\$1.33	\$1.55	\$1.75	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.45	\$2.59	\$2.74	\$2.88	\$3.04	\$3.20	\$101.38
Southern Company	SO	(\$46.26)	\$0.00	\$2.39	\$2.80	\$2.86	\$2.92	\$3.01	\$3.10	\$3.20	\$3.31	\$3.42	\$3.54	\$3.67	\$3.86	\$4.07	\$4.29	\$95.49
Wisconsin Energy Corporation	WEC	(\$70.80)	\$0.00	\$2.11	\$2.49	\$2.70	\$2.86	\$3.07	\$3.28	\$3.49	\$3.71	\$3.94	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$154.05
Xcel Energy Inc.	XEL	(\$50.58)	\$0.00	\$1.39	\$1.65	\$1.85	\$2.00	\$2.14	\$2.29	\$2.45	\$2.61	\$2.78	\$2.95	\$3.12	\$3.29	\$3.46	\$3.65	\$110.88

Multi-Stage Growth Discounted Cash Flow Model
90 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]						
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal						
					Value	Low														
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio						
ALLETE, Inc.	ALE	\$76.90	NA	6.00%	3.50%	3.50%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.02%	25.59	4.81						
Alliant Energy Corporation	LNT	\$43.76	6.00%	7.25%	6.50%	6.00%	5.32%	63.00%	64.00%	65.57%	\$0.00	8.94%	19.06	3.58						
Ameren Corporation	AEE	\$67.10	6.80%	7.70%	7.50%	6.80%	5.32%	58.00%	59.00%	65.57%	\$0.00	8.75%	20.10	3.78						
American Electric Power Company, Inc.	AEP	\$75.90	5.80%	5.74%	4.50%	4.50%	5.32%	68.00%	65.00%	65.57%	\$0.00	8.74%	20.16	3.79						
Avangrid, Inc.	AGR	\$49.34	8.70%	9.20%	12.00%	8.70%	5.32%	70.00%	67.00%	65.57%	\$0.00	8.64%	20.79	3.91						
Black Hills Corporation	BKH	\$64.12	4.70%	4.46%	6.50%	4.46%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.00%	18.78	3.53						
CMS Energy Corporation	CMS	\$50.75	6.40%	7.09%	7.00%	6.40%	5.32%	60.00%	59.00%	65.57%	\$0.00	8.78%	19.95	3.75						
DTE Energy Company	DTE	\$114.88	6.00%	5.49%	7.50%	5.49%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.10%	18.27	3.44						
El Paso Electric Company	EE	\$54.34	4.40%	5.10%	3.00%	3.00%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.15%	24.43	4.59						
Evergy, Inc.	EVRG	\$57.59	7.80%	9.20%	NMF	7.80%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.00%	18.74	3.52						
Hawaiian Electric Industries, Inc.	HE	\$37.01	6.40%	7.80%	3.50%	3.50%	5.32%	61.00%	62.00%	65.57%	\$0.00	8.23%	23.75	4.47						
NextEra Energy, Inc.	NEE	\$175.87	7.70%	7.45%	9.00%	7.45%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.56%	21.28	4.00						
NorthWestern Corporation	NWE	\$61.78	2.60%	2.59%	2.50%	2.50%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.67%	20.60	3.87						
OGE Energy Corp.	OGE	\$39.18	5.20%	NA	6.00%	5.20%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.09%	18.32	3.44						
Otter Tail Corporation	OTTR	\$47.95	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.08%	18.36	3.45						
Pinnacle West Capital Corporation	PNW	\$86.69	4.60%	4.16%	6.00%	4.16%	5.32%	62.00%	62.00%	65.57%	\$0.00	8.85%	19.53	3.67						
PNM Resources, Inc.	PNM	\$41.40	4.70%	4.10%	7.50%	4.10%	5.32%	50.00%	50.00%	65.57%	\$0.00	8.40%	22.41	4.21						
Portland General Electric Company	POR	\$46.88	3.30%	5.05%	4.00%	3.30%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.49%	21.78	4.10						
Southern Company	SO	\$46.26	4.50%	1.68%	3.50%	1.68%	5.32%	78.00%	73.00%	65.57%	\$0.00	9.53%	16.38	3.08						
Wisconsin Energy Corporation	WEC	\$70.80	4.40%	4.70%	7.00%	4.40%	5.32%	67.00%	65.00%	65.57%	\$0.00	8.47%	21.90	4.12						
Xcel Energy Inc.	XEL	\$50.58	5.90%	6.64%	5.50%	5.50%	5.32%	61.00%	63.00%	65.57%	\$0.00	8.79%	19.86	3.73						
											Mean	8.73%								
											Max	9.53%								
											Min	8.02%								
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]		
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
ALLETE, Inc.	ALE	\$3.13	\$3.24	\$3.35	\$3.47	\$3.59	\$3.72	\$3.85	\$3.99	\$4.16	\$4.34	\$4.55	\$4.77	\$5.03	\$5.29	\$5.58	\$5.87	\$6.19		
Alliant Energy Corporation	LNT	\$1.99	\$2.11	\$2.24	\$2.37	\$2.51	\$2.66	\$2.82	\$2.99	\$3.16	\$3.34	\$3.53	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82		
Ameren Corporation	AEE	\$2.77	\$2.96	\$3.16	\$3.37	\$3.60	\$3.85	\$4.11	\$4.38	\$4.66	\$4.94	\$5.23	\$5.52	\$5.81	\$6.12	\$6.44	\$6.79	\$7.15		
American Electric Power Company, Inc.	AEP	\$3.62	\$3.78	\$3.95	\$4.13	\$4.32	\$4.51	\$4.71	\$4.93	\$5.17	\$5.42	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76		
Avangrid, Inc.	AGR	\$1.67	\$1.82	\$1.97	\$2.14	\$2.33	\$2.53	\$2.75	\$2.98	\$3.20	\$3.43	\$3.65	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01		
Black Hills Corporation	BKH	\$3.38	\$3.53	\$3.69	\$3.85	\$4.02	\$4.20	\$4.39	\$4.59	\$4.81	\$5.05	\$5.30	\$5.58	\$5.87	\$6.18	\$6.51	\$6.86	\$7.22		
CMS Energy Corporation	CMS	\$2.17	\$2.31	\$2.46	\$2.61	\$2.78	\$2.96	\$3.15	\$3.34	\$3.55	\$3.75	\$3.97	\$4.19	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42		
DTE Energy Company	DTE	\$5.73	\$6.04	\$6.38	\$6.73	\$7.10	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25	\$9.75	\$10.27	\$10.82	\$11.39	\$12.00	\$12.64	\$13.31		
El Paso Electric Company	EE	\$2.42	\$2.49	\$2.57	\$2.64	\$2.72	\$2.81	\$2.89	\$2.99	\$3.10	\$3.23	\$3.38	\$3.54	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59		
Evergy, Inc.	EVRG	NA	\$2.50	\$2.70	\$2.91	\$3.13	\$3.38	\$3.64	\$3.91	\$4.18	\$4.45	\$4.73	\$5.00	\$5.27	\$5.55	\$5.84	\$6.15	\$6.48		
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.70	\$1.76	\$1.82	\$1.88	\$1.95	\$2.02	\$2.09	\$2.18	\$2.27	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24		
NextEra Energy, Inc.	NEE	\$6.50	\$6.98	\$7.50	\$8.06	\$8.66	\$9.31	\$10.00	\$10.71	\$11.44	\$12.17	\$12.90	\$13.63	\$14.36	\$15.12	\$15.92	\$16.77	\$17.66		
NorthWestern Corporation	NWE	\$3.34	\$3.42	\$3.51	\$3.60	\$3.69	\$3.78	\$3.87	\$3.99	\$4.13	\$4.29	\$4.47	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08		
OGE Energy Corp.	OGE	\$1.92	\$2.02	\$2.12	\$2.24	\$2.35	\$2.47	\$2.60	\$2.74	\$2.88	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.93	\$4.14	\$4.36		
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71		
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.61	\$4.81	\$5.01	\$5.21	\$5.43	\$5.66	\$5.90	\$6.17	\$6.46	\$6.78	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24		
PNM Resources, Inc.	PNM	\$1.92	\$2.00	\$2.08	\$2.17	\$2.25	\$2.35	\$2.44	\$2.55	\$2.66	\$2.79	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98		
Portland General Electric Company	POR	\$2.29	\$2.37	\$2.44	\$2.52	\$2.61	\$2.69	\$2.78	\$2.88	\$3.00	\$3.13	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23	\$4.45		
Southern Company	SO	\$3.21	\$3.26	\$3.32	\$3.37	\$3.43	\$3.49	\$3.55	\$3.63	\$3.73	\$3.86	\$4.02	\$4.21	\$4.44	\$4.67	\$4.92	\$5.18	\$5.46		
Wisconsin Energy Corporation	WEC	\$3.14	\$3.28	\$3.42	\$3.57	\$3.73	\$3.89	\$4.07	\$4.25	\$4.45	\$4.67	\$4.90	\$5.15	\$5.43	\$5.72	\$6.02	\$6.34	\$6.68		
Xcel Energy Inc.	XEL	\$2.30	\$2.43	\$2.56	\$2.70	\$2.85	\$3.01	\$3.17	\$3.34	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35		

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.21	\$2.29	\$2.37	\$2.45	\$2.54	\$2.63	\$2.74	\$2.85	\$2.99	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$4.06	\$158.31
Alliant Energy Corporation	LNT	\$1.41	\$1.50	\$1.60	\$1.70	\$1.81	\$1.93	\$2.04	\$2.17	\$2.30	\$2.43	\$2.57	\$2.70	\$2.85	\$3.00	\$3.16	\$91.82
Ameren Corporation	AEE	\$1.83	\$1.97	\$2.11	\$2.27	\$2.46	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.81	\$4.01	\$4.23	\$4.45	\$4.69	\$143.63
American Electric Power Company, Inc.	AEP	\$2.69	\$2.77	\$2.85	\$2.93	\$3.07	\$3.21	\$3.37	\$3.54	\$3.73	\$3.92	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$156.51
Avangrid, Inc.	AGR	\$1.38	\$1.48	\$1.59	\$1.70	\$1.84	\$1.98	\$2.13	\$2.27	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.28	\$104.12
Black Hills Corporation	BKH	\$2.18	\$2.25	\$2.32	\$2.40	\$2.56	\$2.73	\$2.92	\$3.12	\$3.35	\$3.59	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74	\$135.63
CMS Energy Corporation	CMS	\$1.47	\$1.56	\$1.65	\$1.75	\$1.89	\$2.04	\$2.19	\$2.36	\$2.53	\$2.71	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$108.17
DTE Energy Company	DTE	\$3.89	\$4.06	\$4.23	\$4.42	\$4.73	\$5.07	\$5.43	\$5.81	\$6.21	\$6.64	\$7.09	\$7.47	\$7.87	\$8.29	\$8.73	\$243.22
El Paso Electric Company	EE	\$1.57	\$1.65	\$1.73	\$1.82	\$1.88	\$1.95	\$2.02	\$2.11	\$2.21	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$112.11
Evergy, Inc.	EVRG	\$1.86	\$1.97	\$2.08	\$2.19	\$2.37	\$2.55	\$2.73	\$2.91	\$3.09	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$121.39
Hawaiian Electric Industries, Inc.	HE	\$1.07	\$1.12	\$1.16	\$1.21	\$1.26	\$1.32	\$1.38	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.92	\$2.02	\$2.13	\$76.97
NextEra Energy, Inc.	NEE	\$4.43	\$4.81	\$5.23	\$5.68	\$6.17	\$6.67	\$7.20	\$7.74	\$8.29	\$8.85	\$9.41	\$9.91	\$10.44	\$11.00	\$11.58	\$375.86
NorthWestern Corporation	NWE	\$2.28	\$2.37	\$2.47	\$2.57	\$2.62	\$2.68	\$2.76	\$2.86	\$2.97	\$3.09	\$3.24	\$3.41	\$3.59	\$3.78	\$3.99	\$125.19
OGE Energy Corp.	OGE	\$1.51	\$1.59	\$1.67	\$1.76	\$1.83	\$1.90	\$1.98	\$2.06	\$2.14	\$2.23	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$79.81
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$104.85
Pinnacle West Capital Corporation	PNW	\$2.98	\$3.10	\$3.23	\$3.37	\$3.54	\$3.72	\$3.92	\$4.14	\$4.38	\$4.64	\$4.92	\$5.19	\$5.46	\$5.75	\$6.06	\$180.48
PNM Resources, Inc.	PNM	\$1.04	\$1.08	\$1.13	\$1.17	\$1.28	\$1.39	\$1.51	\$1.64	\$1.79	\$1.95	\$2.12	\$2.24	\$2.36	\$2.48	\$2.61	\$89.31
Portland General Electric Company	POR	\$1.47	\$1.55	\$1.63	\$1.72	\$1.79	\$1.86	\$1.94	\$2.03	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$2.92	\$96.98
Southern Company	SO	\$2.59	\$2.58	\$2.56	\$2.55	\$2.55	\$2.57	\$2.61	\$2.66	\$2.72	\$2.81	\$2.91	\$3.06	\$3.23	\$3.40	\$3.58	\$89.39
Wisconsin Energy Corporation	WEC	\$2.29	\$2.37	\$2.45	\$2.53	\$2.65	\$2.77	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$146.26
Xcel Energy Inc.	XEL	\$1.56	\$1.67	\$1.78	\$1.89	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.85	\$3.00	\$3.16	\$3.33	\$3.51	\$106.21

Projected Annual Data		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows		Initial																
Company	Ticker	Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	(\$76.90)	\$0.00	\$1.93	\$2.25	\$2.37	\$2.45	\$2.54	\$2.63	\$2.74	\$2.85	\$2.99	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$162.36
Alliant Energy Corporation	LNT	(\$43.76)	\$0.00	\$1.23	\$1.45	\$1.60	\$1.70	\$1.81	\$1.93	\$2.04	\$2.17	\$2.30	\$2.43	\$2.57	\$2.70	\$2.85	\$3.00	\$94.98
Ameren Corporation	AEE	(\$67.10)	\$0.00	\$1.60	\$1.89	\$2.11	\$2.27	\$2.46	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.81	\$4.01	\$4.23	\$4.45	\$148.31
American Electric Power Company, Inc.	AEP	(\$75.90)	\$0.00	\$2.35	\$2.75	\$2.85	\$2.93	\$3.07	\$3.21	\$3.37	\$3.54	\$3.73	\$3.92	\$4.14	\$4.36	\$4.59	\$4.83	\$161.60
Avangrid, Inc.	AGR	(\$49.34)	\$0.00	\$1.21	\$1.44	\$1.59	\$1.70	\$1.84	\$1.98	\$2.13	\$2.27	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$107.40
Black Hills Corporation	BKH	(\$64.12)	\$0.00	\$1.90	\$2.22	\$2.32	\$2.40	\$2.56	\$2.73	\$2.92	\$3.12	\$3.35	\$3.59	\$3.85	\$4.05	\$4.27	\$4.50	\$140.37
CMS Energy Corporation	CMS	(\$50.75)	\$0.00	\$1.29	\$1.52	\$1.65	\$1.75	\$1.89	\$2.04	\$2.19	\$2.36	\$2.53	\$2.71	\$2.89	\$3.04	\$3.21	\$3.38	\$111.73
DTE Energy Company	DTE	(\$114.88)	\$0.00	\$3.40	\$4.00	\$4.23	\$4.42	\$4.73	\$5.07	\$5.43	\$5.81	\$6.21	\$6.64	\$7.09	\$7.47	\$7.87	\$8.29	\$251.94
El Paso Electric Company	EE	(\$54.34)	\$0.00	\$1.37	\$1.59	\$1.73	\$1.82	\$1.88	\$1.95	\$2.02	\$2.11	\$2.21	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$115.12
Evergy, Inc.	EVRG	(\$57.59)	\$0.00	\$1.63	\$1.93	\$2.08	\$2.19	\$2.37	\$2.55	\$2.73	\$2.91	\$3.09	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$125.64
Hawaiian Electric Industries, Inc.	HE	(\$37.01)	\$0.00	\$0.94	\$1.09	\$1.16	\$1.21	\$1.26	\$1.32	\$1.38	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.92	\$2.02	\$79.09
NextEra Energy, Inc.	NEE	(\$175.87)	\$0.00	\$3.87	\$4.59	\$5.23	\$5.68	\$6.17	\$6.67	\$7.20	\$7.74	\$8.29	\$8.85	\$9.41	\$9.91	\$10.44	\$11.00	\$387.44
NorthWestern Corporation	NWE	(\$61.78)	\$0.00	\$1.99	\$2.31	\$2.47	\$2.57	\$2.62	\$2.68	\$2.76	\$2.86	\$2.97	\$3.09	\$3.24	\$3.41	\$3.59	\$3.78	\$129.18
OGE Energy Corp.	OGE	(\$39.18)	\$0.00	\$1.32	\$1.55	\$1.67	\$1.76	\$1.83	\$1.90	\$1.98	\$2.06	\$2.14	\$2.23	\$2.32	\$2.45	\$2.58	\$2.71	\$82.66
Otter Tail Corporation	OTTR	(\$47.94)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$108.59
Pinnacle West Capital Corporation	PNW	(\$86.69)	\$0.00	\$2.60	\$3.04	\$3.23	\$3.37	\$3.54	\$3.72	\$3.92	\$4.14	\$4.38	\$4.64	\$4.92	\$5.19	\$5.46	\$5.75	\$186.54
PNM Resources, Inc.	PNM	(\$41.40)	\$0.00	\$0.91	\$1.06	\$1.13	\$1.17	\$1.28	\$1.39	\$1.51	\$1.64	\$1.79	\$1.95	\$2.12	\$2.24	\$2.36	\$2.48	\$91.93
Portland General Electric Company	POR	(\$46.88)	\$0.00	\$1.28	\$1.49	\$1.63	\$1.72	\$1.79	\$1.86	\$1.94	\$2.03	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$99.90
Southern Company	SO	(\$46.26)	\$0.00	\$2.26	\$2.61	\$2.56	\$2.55	\$2.55	\$2.57	\$2.61	\$2.66	\$2.72	\$2.81	\$2.91	\$3.06	\$3.23	\$3.40	\$92.96
Wisconsin Energy Corporation	WEC	(\$70.80)	\$0.00	\$2.00	\$2.34	\$2.45	\$2.53	\$2.65	\$2.77	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	\$3.95	\$4.16	\$150.64
Xcel Energy Inc.	XEL	(\$50.58)	\$0.00	\$1.36	\$1.60	\$1.78	\$1.89	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.85	\$3.00	\$3.16	\$3.33	\$109.71

Multi-Stage Growth Discounted Cash Flow Model
180 Day Average Stock Price
Average EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]				
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal				
			Value											PEG				
Company	Ticker	Price	Zacks	First Call	Line	Average	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio				
ALLETE, Inc.	ALE	\$76.55	NA	6.00%	3.50%	4.75%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.30%	23.15	4.35				
Alliant Energy Corporation	LNT	\$43.06	6.00%	7.25%	6.50%	6.58%	5.32%	63.00%	64.00%	65.57%	\$0.00	9.16%	17.97	3.38				
Ameren Corporation	AEE	\$64.47	6.80%	7.70%	7.50%	7.33%	5.32%	58.00%	59.00%	65.57%	\$0.00	9.03%	18.59	3.50				
American Electric Power Company, Inc.	AEP	\$72.93	5.80%	5.74%	4.50%	5.35%	5.32%	68.00%	65.00%	65.57%	\$0.00	9.12%	18.17	3.42				
Avangrid, Inc.	AGR	\$49.90	8.70%	9.20%	12.00%	9.97%	5.32%	70.00%	67.00%	65.57%	\$0.00	8.91%	19.20	3.61				
Black Hills Corporation	BKH	\$61.83	4.70%	4.46%	6.50%	5.22%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.35%	17.12	3.22				
CMS Energy Corporation	CMS	\$49.29	6.40%	7.09%	7.00%	6.83%	5.32%	60.00%	59.00%	65.57%	\$0.00	9.00%	18.78	3.53				
DTE Energy Company	DTE	\$111.00	6.00%	5.49%	7.50%	6.33%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.47%	16.61	3.12				
El Paso Electric Company	EE	\$57.24	4.40%	5.10%	3.00%	4.17%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.25%	23.54	4.43				
Evergy, Inc.	EVRG	\$56.71	7.80%	9.20%	NMF	8.50%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.23%	17.66	3.32				
Hawaiian Electric Industries, Inc.	HE	\$35.90	6.40%	7.80%	3.50%	5.90%	5.32%	61.00%	62.00%	65.57%	\$0.00	8.91%	19.24	3.62				
NextEra Energy, Inc.	NEE	\$171.99	7.70%	7.45%	9.00%	8.05%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.78%	19.94	3.75				
NorthWestern Corporation	NWE	\$59.97	2.60%	2.59%	2.50%	2.56%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.79%	19.87	3.74				
OGE Energy Corp.	OGE	\$37.55	5.20%	NA	6.00%	5.60%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.38%	17.02	3.20				
Otter Tail Corporation	OTTR	\$47.92	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.08%	18.35	3.45				
Pinnacle West Capital Corporation	PNW	\$83.10	4.60%	4.16%	6.00%	4.92%	5.32%	62.00%	62.00%	65.57%	\$0.00	9.22%	17.69	3.33				
PNM Resources, Inc.	PNM	\$40.10	4.70%	4.10%	7.50%	5.43%	5.32%	50.00%	50.00%	65.57%	\$0.00	8.82%	19.69	3.70				
Portland General Electric Company	POR	\$45.72	3.30%	5.05%	4.00%	4.12%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.78%	19.96	3.75				
Southern Company	SO	\$45.92	4.50%	1.68%	3.50%	3.23%	5.32%	78.00%	73.00%	65.57%	\$0.00	10.11%	14.42	2.71				
Wisconsin Energy Corporation	WEC	\$68.11	4.40%	4.70%	7.00%	5.37%	5.32%	67.00%	65.00%	65.57%	(\$0.00)	8.84%	19.58	3.68				
Xcel Energy Inc.	XEL	\$48.50	5.90%	6.64%	5.50%	6.01%	5.32%	61.00%	63.00%	65.57%	\$0.00	9.08%	18.34	3.45				
											Mean	9.03%						
											Max	10.11%						
											Min	8.25%						
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	\$3.13	\$3.28	\$3.43	\$3.60	\$3.77	\$3.95	\$4.13	\$4.34	\$4.55	\$4.78	\$5.02	\$5.29	\$5.57	\$5.86	\$6.17	\$6.50	\$6.85
Alliant Energy Corporation	LNT	\$1.99	\$2.12	\$2.26	\$2.41	\$2.57	\$2.74	\$2.92	\$3.10	\$3.29	\$3.49	\$3.69	\$3.89	\$4.10	\$4.32	\$4.55	\$4.79	\$5.05
Ameren Corporation	AEE	\$2.77	\$2.97	\$3.19	\$3.43	\$3.68	\$3.95	\$4.24	\$4.53	\$4.83	\$5.14	\$5.45	\$5.76	\$6.06	\$6.38	\$6.72	\$7.08	\$7.46
American Electric Power Company, Inc.	AEP	\$3.62	\$3.81	\$4.02	\$4.23	\$4.46	\$4.70	\$4.95	\$5.21	\$5.49	\$5.78	\$6.09	\$6.42	\$6.76	\$7.12	\$7.49	\$7.89	\$8.31
Avangrid, Inc.	AGR	\$1.67	\$1.84	\$2.02	\$2.22	\$2.44	\$2.69	\$2.95	\$3.22	\$3.50	\$3.76	\$4.02	\$4.27	\$4.49	\$4.73	\$4.98	\$5.25	\$5.53
Black Hills Corporation	BKH	\$3.38	\$3.56	\$3.74	\$3.94	\$4.14	\$4.36	\$4.59	\$4.83	\$5.08	\$5.35	\$5.63	\$5.93	\$6.24	\$6.58	\$6.93	\$7.29	\$7.68
CMS Energy Corporation	CMS	\$2.17	\$2.32	\$2.48	\$2.65	\$2.83	\$3.02	\$3.23	\$3.44	\$3.66	\$3.88	\$4.10	\$4.33	\$4.56	\$4.80	\$5.06	\$5.33	\$5.61
DTE Energy Company	DTE	\$5.73	\$6.09	\$6.48	\$6.89	\$7.32	\$7.79	\$8.28	\$8.79	\$9.32	\$9.86	\$10.42	\$10.99	\$11.57	\$12.19	\$12.84	\$13.52	\$14.24
El Paso Electric Company	EE	\$2.42	\$2.52	\$2.63	\$2.74	\$2.85	\$2.97	\$3.09	\$3.23	\$3.37	\$3.53	\$3.71	\$3.90	\$4.10	\$4.32	\$4.55	\$4.80	\$5.05
Evergy, Inc.	EVRG	NA	\$2.50	\$2.71	\$2.94	\$3.19	\$3.46	\$3.76	\$4.06	\$4.36	\$4.66	\$4.96	\$5.25	\$5.53	\$5.82	\$6.13	\$6.46	\$6.80
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.74	\$1.84	\$1.95	\$2.06	\$2.18	\$2.31	\$2.45	\$2.59	\$2.73	\$2.88	\$3.04	\$3.20	\$3.37	\$3.55	\$3.74	\$3.94
NextEra Energy, Inc.	NEE	\$6.50	\$7.02	\$7.59	\$8.20	\$8.86	\$9.57	\$10.34	\$11.13	\$11.92	\$12.72	\$13.51	\$14.29	\$15.05	\$15.85	\$16.70	\$17.58	\$18.52
NorthWestern Corporation	NWE	\$3.34	\$3.43	\$3.51	\$3.60	\$3.70	\$3.79	\$3.89	\$4.01	\$4.14	\$4.31	\$4.50	\$4.72	\$4.97	\$5.23	\$5.51	\$5.80	\$6.11
OGE Energy Corp.	OGE	\$1.92	\$2.03	\$2.14	\$2.26	\$2.39	\$2.52	\$2.66	\$2.81	\$2.97	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$4.06	\$4.27	\$4.50
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.65	\$4.88	\$5.12	\$5.37	\$5.63	\$5.91	\$6.20	\$6.52	\$6.85	\$7.21	\$7.59	\$7.99	\$8.41	\$8.86	\$9.33	\$9.83
PNM Resources, Inc.	PNM	\$1.92	\$2.02	\$2.13	\$2.25	\$2.37	\$2.50	\$2.64	\$2.78	\$2.93	\$3.09	\$3.25	\$3.43	\$3.61	\$3.80	\$4.00	\$4.22	\$4.44
Portland General Electric Company	POR	\$2.29	\$2.38	\$2.48	\$2.58	\$2.69	\$2.80	\$2.92	\$3.04	\$3.18	\$3.33	\$3.49	\$3.67	\$3.87	\$4.07	\$4.29	\$4.52	\$4.76
Southern Company	SO	\$3.21	\$3.31	\$3.42	\$3.53	\$3.64	\$3.76	\$3.88	\$4.02	\$4.18	\$4.36	\$4.56	\$4.79	\$5.04	\$5.31	\$5.59	\$5.89	\$6.20
Wisconsin Energy Corporation	WEC	\$3.14	\$3.31	\$3.49	\$3.67	\$3.87	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$5.29	\$5.57	\$5.87	\$6.18	\$6.51	\$6.86	\$7.22
Xcel Energy Inc.	XEL	\$2.30	\$2.44	\$2.58	\$2.74	\$2.91	\$3.08	\$3.27	\$3.46	\$3.66	\$3.86	\$4.08	\$4.30	\$4.53	\$4.77	\$5.02	\$5.29	\$5.57

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.27	\$2.37	\$2.49	\$2.61	\$2.73	\$2.86	\$2.99	\$3.14	\$3.30	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$4.49	\$158.54
Alliant Energy Corporation	LNT	\$1.42	\$1.53	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.27	\$2.40	\$2.55	\$2.69	\$2.83	\$2.98	\$3.14	\$3.31	\$90.71
Ameren Corporation	AEE	\$1.85	\$2.00	\$2.16	\$2.33	\$2.54	\$2.76	\$2.99	\$3.23	\$3.47	\$3.72	\$3.97	\$4.19	\$4.41	\$4.64	\$4.89	\$138.62
American Electric Power Company, Inc.	AEP	\$2.73	\$2.84	\$2.94	\$3.05	\$3.22	\$3.40	\$3.58	\$3.78	\$3.98	\$4.20	\$4.43	\$4.67	\$4.91	\$5.18	\$5.45	\$151.07
Avangrid, Inc.	AGR	\$1.41	\$1.53	\$1.66	\$1.80	\$1.97	\$2.15	\$2.32	\$2.49	\$2.65	\$2.81	\$2.95	\$3.10	\$3.27	\$3.44	\$3.62	\$106.16
Black Hills Corporation	BKH	\$2.21	\$2.30	\$2.39	\$2.48	\$2.67	\$2.87	\$3.08	\$3.31	\$3.55	\$3.82	\$4.09	\$4.31	\$4.54	\$4.78	\$5.04	\$131.56
CMS Energy Corporation	CMS	\$1.49	\$1.58	\$1.68	\$1.78	\$1.93	\$2.09	\$2.26	\$2.43	\$2.61	\$2.80	\$2.99	\$3.15	\$3.32	\$3.49	\$3.68	\$105.40
DTE Energy Company	DTE	\$3.95	\$4.16	\$4.37	\$4.60	\$4.96	\$5.35	\$5.76	\$6.19	\$6.64	\$7.10	\$7.59	\$7.99	\$8.42	\$8.87	\$9.34	\$236.57
El Paso Electric Company	EE	\$1.60	\$1.70	\$1.81	\$1.93	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.14	\$3.31	\$118.89
Evergy, Inc.	EVRG	\$1.87	\$1.99	\$2.12	\$2.25	\$2.45	\$2.64	\$2.85	\$3.05	\$3.24	\$3.44	\$3.63	\$3.82	\$4.02	\$4.23	\$4.46	\$120.12
Hawaiian Electric Industries, Inc.	HE	\$1.12	\$1.19	\$1.27	\$1.35	\$1.45	\$1.54	\$1.64	\$1.75	\$1.86	\$1.98	\$2.10	\$2.21	\$2.33	\$2.45	\$2.58	\$75.75
NextEra Energy, Inc.	NEE	\$4.48	\$4.89	\$5.35	\$5.84	\$6.38	\$6.93	\$7.51	\$8.09	\$8.68	\$9.28	\$9.87	\$10.40	\$10.95	\$11.53	\$12.14	\$369.19
NorthWestern Corporation	NWE	\$2.28	\$2.38	\$2.48	\$2.58	\$2.63	\$2.70	\$2.78	\$2.87	\$2.98	\$3.11	\$3.26	\$3.43	\$3.61	\$3.80	\$4.01	\$121.43
OGE Energy Corp.	OGE	\$1.52	\$1.61	\$1.70	\$1.79	\$1.87	\$1.95	\$2.04	\$2.12	\$2.21	\$2.30	\$2.40	\$2.53	\$2.66	\$2.80	\$2.95	\$76.57
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$104.79
Pinnacle West Capital Corporation	PNW	\$3.02	\$3.17	\$3.33	\$3.49	\$3.69	\$3.91	\$4.14	\$4.39	\$4.65	\$4.93	\$5.24	\$5.52	\$5.81	\$6.12	\$6.44	\$173.82
PNM Resources, Inc.	PNM	\$1.07	\$1.13	\$1.19	\$1.25	\$1.38	\$1.51	\$1.66	\$1.82	\$1.99	\$2.17	\$2.37	\$2.49	\$2.62	\$2.76	\$2.91	\$87.44
Portland General Electric Company	POR	\$1.49	\$1.59	\$1.69	\$1.79	\$1.87	\$1.96	\$2.06	\$2.16	\$2.28	\$2.40	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$94.99
Southern Company	SO	\$2.67	\$2.70	\$2.72	\$2.75	\$2.79	\$2.85	\$2.92	\$3.00	\$3.09	\$3.19	\$3.31	\$3.48	\$3.67	\$3.86	\$4.07	\$89.47
Wisconsin Energy Corporation	WEC	\$2.34	\$2.44	\$2.54	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74	\$141.42
Xcel Energy Inc.	XEL	\$1.58	\$1.69	\$1.81	\$1.94	\$2.07	\$2.20	\$2.34	\$2.49	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$3.65	\$102.19

Projected Annual Data			[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows																			
Company	Ticker	Initial Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33	
ALLETE, Inc.	ALE	(\$76.55)	\$0.00	\$1.98	\$2.32	\$2.49	\$2.61	\$2.73	\$2.86	\$2.99	\$3.14	\$3.30	\$3.47	\$3.65	\$3.84	\$4.05	\$4.26	\$163.03	
Alliant Energy Corporation	LNT	(\$43.06)	\$0.00	\$1.24	\$1.47	\$1.64	\$1.75	\$1.87	\$2.00	\$2.13	\$2.27	\$2.40	\$2.55	\$2.69	\$2.83	\$2.98	\$3.14	\$94.02	
Ameren Corporation	AEE	(\$64.47)	\$0.00	\$1.62	\$1.92	\$2.16	\$2.33	\$2.54	\$2.76	\$2.99	\$3.23	\$3.47	\$3.72	\$3.97	\$4.19	\$4.41	\$4.64	\$143.51	
American Electric Power Company, Inc.	AEP	(\$72.93)	\$0.00	\$2.39	\$2.80	\$2.94	\$3.05	\$3.22	\$3.40	\$3.58	\$3.78	\$3.98	\$4.20	\$4.43	\$4.67	\$4.91	\$5.18	\$156.52	
Avangrid, Inc.	AGR	(\$49.90)	\$0.00	\$1.24	\$1.48	\$1.66	\$1.80	\$1.97	\$2.15	\$2.32	\$2.49	\$2.65	\$2.81	\$2.95	\$3.10	\$3.27	\$3.44	\$109.79	
Black Hills Corporation	BKH	(\$61.83)	\$0.00	\$1.93	\$2.27	\$2.39	\$2.48	\$2.67	\$2.87	\$3.08	\$3.31	\$3.55	\$3.82	\$4.09	\$4.31	\$4.54	\$4.78	\$136.60	
CMS Energy Corporation	CMS	(\$49.29)	\$0.00	\$1.30	\$1.54	\$1.68	\$1.78	\$1.93	\$2.09	\$2.26	\$2.43	\$2.61	\$2.80	\$2.99	\$3.15	\$3.32	\$3.49	\$109.08	
DTE Energy Company	DTE	(\$111.00)	\$0.00	\$3.45	\$4.08	\$4.37	\$4.60	\$4.96	\$5.35	\$5.76	\$6.19	\$6.64	\$7.10	\$7.59	\$7.99	\$8.42	\$8.87	\$245.91	
El Paso Electric Company	EE	(\$57.24)	\$0.00	\$1.40	\$1.64	\$1.81	\$1.93	\$2.01	\$2.10	\$2.20	\$2.31	\$2.42	\$2.55	\$2.69	\$2.83	\$2.99	\$3.14	\$122.20	
Evergy, Inc.	EVRG	(\$56.71)	\$0.00	\$1.64	\$1.95	\$2.12	\$2.25	\$2.45	\$2.64	\$2.85	\$3.05	\$3.24	\$3.44	\$3.63	\$3.82	\$4.02	\$4.23	\$124.58	
Hawaiian Electric Industries, Inc.	HE	(\$35.90)	\$0.00	\$0.98	\$1.16	\$1.27	\$1.35	\$1.45	\$1.54	\$1.64	\$1.75	\$1.86	\$1.98	\$2.10	\$2.21	\$2.33	\$2.45	\$78.33	
NextEra Energy, Inc.	NEE	(\$171.99)	\$0.00	\$3.91	\$4.66	\$5.35	\$5.84	\$6.38	\$6.93	\$7.51	\$8.09	\$8.68	\$9.28	\$9.87	\$10.40	\$10.95	\$11.53	\$381.33	
NorthWestern Corporation	NWE	(\$59.97)	\$0.00	\$2.00	\$2.31	\$2.48	\$2.58	\$2.63	\$2.70	\$2.78	\$2.87	\$2.98	\$3.11	\$3.26	\$3.43	\$3.61	\$3.80	\$125.44	
OGE Energy Corp.	OGE	(\$37.55)	\$0.00	\$1.33	\$1.56	\$1.70	\$1.79	\$1.87	\$1.95	\$2.04	\$2.12	\$2.21	\$2.30	\$2.40	\$2.53	\$2.66	\$2.80	\$79.52	
Otter Tail Corporation	OTTR	(\$47.91)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$108.53	
Pinnacle West Capital Corporation	PNW	(\$83.10)	\$0.00	\$2.64	\$3.10	\$3.33	\$3.49	\$3.69	\$3.91	\$4.14	\$4.39	\$4.65	\$4.93	\$5.24	\$5.52	\$5.81	\$6.12	\$180.26	
PNM Resources, Inc.	PNM	(\$40.10)	\$0.00	\$0.93	\$1.10	\$1.19	\$1.25	\$1.38	\$1.51	\$1.66	\$1.82	\$1.99	\$2.17	\$2.37	\$2.49	\$2.62	\$2.76	\$90.36	
Portland General Electric Company	POR	(\$45.72)	\$0.00	\$1.30	\$1.52	\$1.69	\$1.79	\$1.87	\$1.96	\$2.06	\$2.16	\$2.28	\$2.40	\$2.54	\$2.67	\$2.81	\$2.96	\$98.11	
Southern Company	SO	(\$45.92)	\$0.00	\$2.33	\$2.71	\$2.72	\$2.75	\$2.79	\$2.85	\$2.92	\$3.00	\$3.09	\$3.19	\$3.31	\$3.48	\$3.67	\$3.86	\$93.54	
Wisconsin Energy Corporation	WEC	(\$68.11)	\$0.00	\$2.04	\$2.40	\$2.54	\$2.65	\$2.80	\$2.95	\$3.11	\$3.28	\$3.46	\$3.65	\$3.85	\$4.05	\$4.27	\$4.50	\$146.16	
Xcel Energy Inc.	XEL	(\$48.50)	\$0.00	\$1.38	\$1.62	\$1.81	\$1.94	\$2.07	\$2.20	\$2.34	\$2.49	\$2.64	\$2.80	\$2.97	\$3.13	\$3.29	\$3.47	\$105.84	

Multi-Stage Growth Discounted Cash Flow Model
180 Day Average Stock Price
High EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]						
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal PEG						
				Value	High															
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio						
ALLETE, Inc.	ALE	\$76.55	NA	6.00%	3.50%	6.00%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.59%	21.07	3.96						
Alliant Energy Corporation	LNT	\$43.06	6.00%	7.25%	6.50%	7.25%	5.32%	63.00%	64.00%	65.57%	\$0.00	9.35%	17.13	3.22						
Ameren Corporation	AEE	\$64.47	6.80%	7.70%	7.50%	7.70%	5.32%	58.00%	59.00%	65.57%	\$0.00	9.13%	18.11	3.41						
American Electric Power Company, Inc.	AEP	\$72.93	5.80%	5.74%	4.50%	5.80%	5.32%	68.00%	65.00%	65.57%	\$0.00	9.25%	17.58	3.30						
Avangrid, Inc.	AGR	\$49.90	8.70%	9.20%	12.00%	12.00%	5.32%	70.00%	67.00%	65.57%	\$0.00	9.46%	16.67	3.13						
Black Hills Corporation	BKH	\$61.83	4.70%	4.46%	6.50%	6.50%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.74%	15.62	2.94						
CMS Energy Corporation	CMS	\$49.29	6.40%	7.09%	7.00%	7.09%	5.32%	60.00%	59.00%	65.57%	\$0.00	9.06%	18.43	3.47						
DTE Energy Company	DTE	\$111.00	6.00%	5.49%	7.50%	7.50%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.84%	15.29	2.87						
El Paso Electric Company	EE	\$57.24	4.40%	5.10%	3.00%	5.10%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.47%	21.94	4.12						
Evergy, Inc.	EVRG	\$56.71	7.80%	9.20%	NMF	9.20%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.40%	16.91	3.18						
Hawaiian Electric Industries, Inc.	HE	\$35.90	6.40%	7.80%	3.50%	7.80%	5.32%	61.00%	62.00%	65.57%	\$0.00	9.44%	16.77	3.15						
NextEra Energy, Inc.	NEE	\$171.99	7.70%	7.45%	9.00%	9.00%	5.32%	59.00%	61.00%	65.57%	\$0.00	9.02%	18.63	3.50						
NorthWestern Corporation	NWE	\$59.97	2.60%	2.59%	2.50%	2.60%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.80%	19.82	3.73						
OGE Energy Corp.	OGE	\$37.55	5.20%	NA	6.00%	6.00%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.50%	16.52	3.11						
Otter Tail Corporation	OTTR	\$47.92	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.08%	18.35	3.45						
Pinnacle West Capital Corporation	PNW	\$83.10	4.60%	4.16%	6.00%	6.00%	5.32%	62.00%	62.00%	65.57%	\$0.00	9.54%	16.34	3.07						
PNM Resources, Inc.	PNM	\$40.10	4.70%	4.10%	7.50%	7.50%	5.32%	50.00%	50.00%	65.57%	\$0.00	9.38%	17.00	3.20						
Portland General Electric Company	POR	\$45.72	3.30%	5.05%	4.00%	5.05%	5.32%	60.00%	64.00%	65.57%	\$0.00	9.03%	18.61	3.50						
Southern Company	SO	\$45.92	4.50%	1.68%	3.50%	4.50%	5.32%	78.00%	73.00%	65.57%	\$0.00	10.58%	13.11	2.47						
Wisconsin Energy Corporation	WEC	\$68.11	4.40%	4.70%	7.00%	7.00%	5.32%	67.00%	65.00%	65.57%	(\$0.00)	9.29%	17.37	3.27						
Xcel Energy Inc.	XEL	\$48.50	5.90%	6.64%	5.50%	6.64%	5.32%	61.00%	63.00%	65.57%	\$0.00	9.26%	17.52	3.29						
											Mean	9.30%								
											Max	10.58%								
											Min	8.47%								
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]		
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
ALLETE, Inc.	ALE	\$3.13	\$3.32	\$3.52	\$3.73	\$3.95	\$4.19	\$4.44	\$4.70	\$4.97	\$5.25	\$5.55	\$5.85	\$6.16	\$6.49	\$6.83	\$7.19	\$7.58		
Alliant Energy Corporation	LNT	\$1.99	\$2.13	\$2.29	\$2.45	\$2.63	\$2.82	\$3.03	\$3.24	\$3.45	\$3.67	\$3.89	\$4.11	\$4.33	\$4.56	\$4.80	\$5.05	\$5.32		
Ameren Corporation	AEE	\$2.77	\$2.98	\$3.21	\$3.46	\$3.73	\$4.01	\$4.32	\$4.64	\$4.96	\$5.28	\$5.60	\$5.92	\$6.24	\$6.57	\$6.92	\$7.29	\$7.68		
American Electric Power Company, Inc.	AEP	\$3.62	\$3.83	\$4.05	\$4.29	\$4.54	\$4.80	\$5.08	\$5.37	\$5.67	\$5.99	\$6.31	\$6.65	\$7.01	\$7.38	\$7.77	\$8.19	\$8.62		
Avangrid, Inc.	AGR	\$1.67	\$1.87	\$2.09	\$2.35	\$2.63	\$2.94	\$3.30	\$3.66	\$4.01	\$4.36	\$4.69	\$4.99	\$5.26	\$5.54	\$5.83	\$6.14	\$6.47		
Black Hills Corporation	BKH	\$3.38	\$3.60	\$3.83	\$4.08	\$4.35	\$4.63	\$4.93	\$5.24	\$5.56	\$5.89	\$6.23	\$6.57	\$6.92	\$7.29	\$7.68	\$8.08	\$8.51		
CMS Energy Corporation	CMS	\$2.17	\$2.32	\$2.49	\$2.67	\$2.85	\$3.06	\$3.27	\$3.50	\$3.72	\$3.95	\$4.19	\$4.42	\$4.66	\$4.91	\$5.17	\$5.44	\$5.73		
DTE Energy Company	DTE	\$5.73	\$6.16	\$6.62	\$7.12	\$7.65	\$8.23	\$8.84	\$9.47	\$10.12	\$10.76	\$11.41	\$12.06	\$12.70	\$13.38	\$14.09	\$14.84	\$15.63		
El Paso Electric Company	EE	\$2.42	\$2.54	\$2.67	\$2.81	\$2.95	\$3.10	\$3.26	\$3.43	\$3.61	\$3.79	\$3.99	\$4.20	\$4.43	\$4.66	\$4.91	\$5.17	\$5.45		
Evergy, Inc.	EVRG	NA	\$2.50	\$2.73	\$2.98	\$3.26	\$3.55	\$3.88	\$4.21	\$4.55	\$4.88	\$5.20	\$5.51	\$5.80	\$6.11	\$6.44	\$6.78	\$7.14		
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.77	\$1.91	\$2.05	\$2.21	\$2.39	\$2.57	\$2.76	\$2.96	\$3.15	\$3.34	\$3.54	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58		
NextEra Energy, Inc.	NEE	\$6.50	\$7.09	\$7.72	\$8.42	\$9.18	\$10.00	\$10.90	\$11.82	\$12.73	\$13.65	\$14.54	\$15.40	\$16.22	\$17.08	\$17.99	\$18.95	\$19.96		
NorthWestern Corporation	NWE	\$3.34	\$3.43	\$3.52	\$3.61	\$3.70	\$3.80	\$3.90	\$4.02	\$4.16	\$4.32	\$4.51	\$4.73	\$4.98	\$5.25	\$5.53	\$5.82	\$6.13		
OGE Energy Corp.	OGE	\$1.92	\$2.04	\$2.16	\$2.29	\$2.42	\$2.57	\$2.72	\$2.88	\$3.05	\$3.22	\$3.40	\$3.59	\$3.78	\$3.98	\$4.19	\$4.41	\$4.65		
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71		
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.70	\$4.98	\$5.28	\$5.59	\$5.93	\$6.28	\$6.65	\$7.04	\$7.44	\$7.85	\$8.27	\$8.72	\$9.18	\$9.67	\$10.18	\$10.72		
PNM Resources, Inc.	PNM	\$1.92	\$2.06	\$2.22	\$2.39	\$2.56	\$2.76	\$2.96	\$3.17	\$3.39	\$3.61	\$3.82	\$4.04	\$4.26	\$4.48	\$4.72	\$4.97	\$5.24		
Portland General Electric Company	POR	\$2.29	\$2.41	\$2.53	\$2.65	\$2.79	\$2.93	\$3.08	\$3.23	\$3.40	\$3.58	\$3.76	\$3.96	\$4.17	\$4.40	\$4.63	\$4.87	\$5.13		
Southern Company	SO	\$3.21	\$3.35	\$3.51	\$3.66	\$3.83	\$4.00	\$4.18	\$4.37	\$4.58	\$4.81	\$5.05	\$5.31	\$5.59	\$5.89	\$6.21	\$6.54	\$6.88		
Wisconsin Energy Corporation	WEC	\$3.14	\$3.36	\$3.59	\$3.85	\$4.12	\$4.40	\$4.71	\$5.03	\$5.35	\$5.68	\$6.02	\$6.35	\$6.69	\$7.05	\$7.42	\$7.82	\$8.23		
Xcel Energy Inc.	XEL	\$2.30	\$2.45	\$2.62	\$2.79	\$2.97	\$3.17	\$3.38	\$3.60	\$3.82	\$4.05	\$4.28	\$4.52	\$4.76	\$5.02	\$5.28	\$5.56	\$5.86		

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.32	\$2.46	\$2.61	\$2.76	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$4.25	\$4.48	\$4.72	\$4.97	\$159.64
Alliant Energy Corporation	LNT	\$1.44	\$1.55	\$1.68	\$1.81	\$1.95	\$2.09	\$2.23	\$2.38	\$2.53	\$2.68	\$2.84	\$2.99	\$3.15	\$3.31	\$3.49	\$91.16
Ameren Corporation	AEE	\$1.86	\$2.02	\$2.19	\$2.37	\$2.59	\$2.82	\$3.07	\$3.31	\$3.57	\$3.83	\$4.09	\$4.31	\$4.54	\$4.78	\$5.03	\$139.01
American Electric Power Company, Inc.	AEP	\$2.76	\$2.87	\$2.99	\$3.12	\$3.30	\$3.50	\$3.70	\$3.91	\$4.13	\$4.36	\$4.60	\$4.84	\$5.10	\$5.37	\$5.65	\$151.53
Avangrid, Inc.	AGR	\$1.47	\$1.62	\$1.79	\$1.97	\$2.20	\$2.43	\$2.66	\$2.89	\$3.09	\$3.28	\$3.45	\$3.63	\$3.82	\$4.03	\$4.24	\$107.78
Black Hills Corporation	BKH	\$2.26	\$2.38	\$2.51	\$2.64	\$2.87	\$3.12	\$3.38	\$3.65	\$3.93	\$4.23	\$4.54	\$4.78	\$5.03	\$5.30	\$5.58	\$133.00
CMS Energy Corporation	CMS	\$1.49	\$1.59	\$1.69	\$1.80	\$1.96	\$2.13	\$2.30	\$2.48	\$2.67	\$2.86	\$3.05	\$3.22	\$3.39	\$3.57	\$3.76	\$105.60
DTE Energy Company	DTE	\$4.04	\$4.29	\$4.57	\$4.85	\$5.30	\$5.77	\$6.25	\$6.75	\$7.27	\$7.80	\$8.33	\$8.77	\$9.24	\$9.73	\$10.25	\$238.96
El Paso Electric Company	EE	\$1.63	\$1.75	\$1.88	\$2.02	\$2.12	\$2.23	\$2.35	\$2.48	\$2.61	\$2.75	\$2.90	\$3.06	\$3.22	\$3.39	\$3.57	\$119.49
Evergy, Inc.	EVRG	\$1.88	\$2.02	\$2.16	\$2.31	\$2.53	\$2.75	\$2.97	\$3.19	\$3.40	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$4.68	\$120.75
Hawaiian Electric Industries, Inc.	HE	\$1.16	\$1.26	\$1.37	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.57	\$2.71	\$2.85	\$3.00	\$76.83
NextEra Energy, Inc.	NEE	\$4.56	\$5.02	\$5.54	\$6.10	\$6.72	\$7.36	\$8.02	\$8.68	\$9.34	\$10.00	\$10.64	\$11.20	\$11.80	\$12.42	\$13.08	\$371.78
NorthWestern Corporation	NWE	\$2.29	\$2.38	\$2.48	\$2.58	\$2.64	\$2.70	\$2.78	\$2.88	\$2.99	\$3.12	\$3.27	\$3.44	\$3.62	\$3.82	\$4.02	\$121.45
OGE Energy Corp.	OGE	\$1.53	\$1.62	\$1.72	\$1.82	\$1.91	\$2.00	\$2.09	\$2.19	\$2.28	\$2.38	\$2.48	\$2.61	\$2.75	\$2.89	\$3.05	\$76.77
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$104.79
Pinnacle West Capital Corporation	PNW	\$3.09	\$3.27	\$3.47	\$3.68	\$3.93	\$4.19	\$4.47	\$4.76	\$5.07	\$5.38	\$5.71	\$6.02	\$6.34	\$6.68	\$7.03	\$175.24
PNM Resources, Inc.	PNM	\$1.11	\$1.19	\$1.28	\$1.38	\$1.55	\$1.73	\$1.92	\$2.12	\$2.34	\$2.56	\$2.79	\$2.94	\$3.10	\$3.26	\$3.43	\$89.02
Portland General Electric Company	POR	\$1.52	\$1.63	\$1.75	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.45	\$2.59	\$2.74	\$2.88	\$3.04	\$3.20	\$3.37	\$95.56
Southern Company	SO	\$2.73	\$2.80	\$2.86	\$2.92	\$3.01	\$3.10	\$3.20	\$3.31	\$3.42	\$3.54	\$3.67	\$3.86	\$4.07	\$4.29	\$4.51	\$90.26
Wisconsin Energy Corporation	WEC	\$2.41	\$2.55	\$2.70	\$2.86	\$3.07	\$3.28	\$3.49	\$3.71	\$3.94	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$5.40	\$142.99
Xcel Energy Inc.	XEL	\$1.60	\$1.72	\$1.85	\$2.00	\$2.14	\$2.29	\$2.45	\$2.61	\$2.78	\$2.95	\$3.12	\$3.29	\$3.46	\$3.65	\$3.84	\$102.66

Projected Annual Data		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows		Initial																
Company	Ticker	Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	(\$76.55)	\$0.00	\$2.03	\$2.39	\$2.61	\$2.76	\$2.93	\$3.10	\$3.27	\$3.45	\$3.64	\$3.84	\$4.04	\$4.25	\$4.48	\$4.72	\$164.61
Alliant Energy Corporation	LNT	(\$43.06)	\$0.00	\$1.26	\$1.49	\$1.68	\$1.81	\$1.95	\$2.09	\$2.23	\$2.38	\$2.53	\$2.68	\$2.84	\$2.99	\$3.15	\$3.31	\$94.65
Ameren Corporation	AEE	(\$64.47)	\$0.00	\$1.63	\$1.94	\$2.19	\$2.37	\$2.59	\$2.82	\$3.07	\$3.31	\$3.57	\$3.83	\$4.09	\$4.31	\$4.54	\$4.78	\$144.05
American Electric Power Company, Inc.	AEP	(\$72.93)	\$0.00	\$2.41	\$2.84	\$2.99	\$3.12	\$3.30	\$3.50	\$3.70	\$3.91	\$4.13	\$4.36	\$4.60	\$4.84	\$5.10	\$5.37	\$157.19
Avangrid, Inc.	AGR	(\$49.90)	\$0.00	\$1.28	\$1.55	\$1.79	\$1.97	\$2.20	\$2.43	\$2.66	\$2.89	\$3.09	\$3.28	\$3.45	\$3.63	\$3.82	\$4.03	\$112.02
Black Hills Corporation	BKH	(\$61.83)	\$0.00	\$1.98	\$2.34	\$2.51	\$2.64	\$2.87	\$3.12	\$3.38	\$3.65	\$3.93	\$4.23	\$4.54	\$4.78	\$5.03	\$5.30	\$138.58
CMS Energy Corporation	CMS	(\$49.28)	\$0.00	\$1.30	\$1.55	\$1.69	\$1.80	\$1.96	\$2.13	\$2.30	\$2.48	\$2.67	\$2.86	\$3.05	\$3.22	\$3.39	\$3.57	\$109.36
DTE Energy Company	DTE	(\$111.00)	\$0.00	\$3.53	\$4.19	\$4.57	\$4.85	\$5.30	\$5.77	\$6.25	\$6.75	\$7.27	\$7.80	\$8.33	\$8.77	\$9.24	\$9.73	\$249.21
El Paso Electric Company	EE	(\$57.24)	\$0.00	\$1.43	\$1.67	\$1.88	\$2.02	\$2.12	\$2.23	\$2.35	\$2.48	\$2.61	\$2.75	\$2.90	\$3.06	\$3.22	\$3.39	\$123.07
Evergy, Inc.	EVRG	(\$56.71)	\$0.00	\$1.65	\$1.97	\$2.16	\$2.31	\$2.53	\$2.75	\$2.97	\$3.19	\$3.40	\$3.61	\$3.80	\$4.01	\$4.22	\$4.44	\$125.43
Hawaiian Electric Industries, Inc.	HE	(\$35.90)	\$0.00	\$1.02	\$1.21	\$1.37	\$1.48	\$1.61	\$1.74	\$1.88	\$2.02	\$2.16	\$2.30	\$2.44	\$2.57	\$2.71	\$2.85	\$79.83
NextEra Energy, Inc.	NEE	(\$171.99)	\$0.00	\$3.98	\$4.76	\$5.54	\$6.10	\$6.72	\$7.36	\$8.02	\$8.68	\$9.34	\$10.00	\$10.64	\$11.20	\$11.80	\$12.42	\$384.86
NorthWestern Corporation	NWE	(\$59.97)	\$0.00	\$2.00	\$2.32	\$2.48	\$2.58	\$2.64	\$2.70	\$2.78	\$2.88	\$2.99	\$3.12	\$3.27	\$3.44	\$3.62	\$3.82	\$125.47
OGE Energy Corp.	OGE	(\$37.55)	\$0.00	\$1.34	\$1.58	\$1.72	\$1.82	\$1.91	\$2.00	\$2.09	\$2.19	\$2.28	\$2.38	\$2.48	\$2.61	\$2.75	\$2.89	\$79.82
Otter Tail Corporation	OTTR	(\$47.91)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$108.53
Pinnacle West Capital Corporation	PNW	(\$83.10)	\$0.00	\$2.70	\$3.18	\$3.47	\$3.68	\$3.93	\$4.19	\$4.47	\$4.76	\$5.07	\$5.38	\$5.71	\$6.02	\$6.34	\$6.68	\$182.27
PNM Resources, Inc.	PNM	(\$40.10)	\$0.00	\$0.97	\$1.15	\$1.28	\$1.38	\$1.55	\$1.73	\$1.92	\$2.12	\$2.34	\$2.56	\$2.79	\$2.94	\$3.10	\$3.26	\$92.46
Portland General Electric Company	POR	(\$45.72)	\$0.00	\$1.33	\$1.55	\$1.75	\$1.87	\$1.98	\$2.08	\$2.20	\$2.32	\$2.45	\$2.59	\$2.74	\$2.88	\$3.04	\$3.20	\$98.93
Southern Company	SO	(\$45.92)	\$0.00	\$2.39	\$2.80	\$2.86	\$2.92	\$3.01	\$3.10	\$3.20	\$3.31	\$3.42	\$3.54	\$3.67	\$3.86	\$4.07	\$4.29	\$94.78
Wisconsin Energy Corporation	WEC	(\$68.11)	\$0.00	\$2.11	\$2.49	\$2.70	\$2.86	\$3.07	\$3.28	\$3.49	\$3.71	\$3.94	\$4.16	\$4.39	\$4.62	\$4.87	\$5.13	\$148.39
Xcel Energy Inc.	XEL	(\$48.50)	\$0.00	\$1.39	\$1.65	\$1.85	\$2.00	\$2.14	\$2.29	\$2.45	\$2.61	\$2.78	\$2.95	\$3.12	\$3.29	\$3.46	\$3.65	\$106.50

Multi-Stage Growth Discounted Cash Flow Model
180 Day Average Stock Price
Low EPS Growth Rate Estimate in First Stage

Inputs		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]						
		Stock	EPS Growth Rate Estimates				Long-Term	Payout Ratio			Iterative Solution		Terminal	Terminal						
					Value	Low														
Company	Ticker	Price	Zacks	First Call	Line	Growth	Growth	2019	2022	2029	Proof	IRR	P/E Ratio	Ratio						
ALLETE, Inc.	ALE	\$76.55	NA	6.00%	3.50%	3.50%	5.32%	66.00%	66.00%	65.57%	\$0.00	8.03%	25.48	4.79						
Alliant Energy Corporation	LNT	\$43.06	6.00%	7.25%	6.50%	6.00%	5.32%	63.00%	64.00%	65.57%	\$0.00	9.00%	18.76	3.53						
Ameren Corporation	AEE	\$64.47	6.80%	7.70%	7.50%	6.80%	5.32%	58.00%	59.00%	65.57%	\$0.00	8.89%	19.32	3.63						
American Electric Power Company, Inc.	AEP	\$72.93	5.80%	5.74%	4.50%	4.50%	5.32%	68.00%	65.00%	65.57%	\$0.00	8.89%	19.36	3.64						
Avangrid, Inc.	AGR	\$49.90	8.70%	9.20%	12.00%	8.70%	5.32%	70.00%	67.00%	65.57%	\$0.00	8.60%	21.03	3.95						
Black Hills Corporation	BKH	\$61.83	4.70%	4.46%	6.50%	4.46%	5.32%	59.00%	57.00%	65.57%	\$0.00	9.13%	18.10	3.40						
CMS Energy Corporation	CMS	\$49.29	6.40%	7.09%	7.00%	6.40%	5.32%	60.00%	59.00%	65.57%	\$0.00	8.88%	19.37	3.64						
DTE Energy Company	DTE	\$111.00	6.00%	5.49%	7.50%	5.49%	5.32%	61.00%	59.00%	65.57%	\$0.00	9.23%	17.65	3.32						
El Paso Electric Company	EE	\$57.24	4.40%	5.10%	3.00%	3.00%	5.32%	61.00%	65.00%	65.57%	\$0.00	8.00%	25.75	4.84						
Evergy, Inc.	EVRG	\$56.71	7.80%	9.20%	NMF	7.80%	5.32%	69.00%	65.00%	65.57%	(\$0.00)	9.06%	18.45	3.47						
Hawaiian Electric Industries, Inc.	HE	\$35.90	6.40%	7.80%	3.50%	3.50%	5.32%	61.00%	62.00%	65.57%	\$0.00	8.32%	23.03	4.33						
NextEra Energy, Inc.	NEE	\$171.99	7.70%	7.45%	9.00%	7.45%	5.32%	59.00%	61.00%	65.57%	\$0.00	8.64%	20.82	3.91						
NorthWestern Corporation	NWE	\$59.97	2.60%	2.59%	2.50%	2.50%	5.32%	65.00%	68.00%	65.57%	\$0.00	8.78%	19.97	3.76						
OGE Energy Corp.	OGE	\$37.55	5.20%	NA	6.00%	5.20%	5.32%	71.00%	71.00%	65.57%	\$0.00	9.26%	17.53	3.30						
Otter Tail Corporation	OTTR	\$47.92	NA	9.00%	9.00%	9.00%	5.32%	60.00%	55.00%	65.57%	\$0.00	9.08%	18.35	3.45						
Pinnacle West Capital Corporation	PNW	\$83.10	4.60%	4.16%	6.00%	4.16%	5.32%	62.00%	62.00%	65.57%	\$0.00	9.01%	18.71	3.52						
PNM Resources, Inc.	PNM	\$40.10	4.70%	4.10%	7.50%	4.10%	5.32%	50.00%	50.00%	65.57%	\$0.00	8.50%	21.72	4.08						
Portland General Electric Company	POR	\$45.72	3.30%	5.05%	4.00%	3.30%	5.32%	60.00%	64.00%	65.57%	\$0.00	8.57%	21.24	3.99						
Southern Company	SO	\$45.92	4.50%	1.68%	3.50%	1.68%	5.32%	78.00%	73.00%	65.57%	\$0.00	9.57%	16.25	3.05						
Wisconsin Energy Corporation	WEC	\$68.11	4.40%	4.70%	7.00%	4.40%	5.32%	67.00%	65.00%	65.57%	\$0.00	8.60%	21.05	3.96						
Xcel Energy Inc.	XEL	\$48.50	5.90%	6.64%	5.50%	5.50%	5.32%	61.00%	63.00%	65.57%	\$0.00	8.94%	19.04	3.58						
											Mean	8.81%								
											Max	9.57%								
											Min	8.00%								
Projected Annual Earnings per Share		[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]		
Company	Ticker	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
ALLETE, Inc.	ALE	\$3.13	\$3.24	\$3.35	\$3.47	\$3.59	\$3.72	\$3.85	\$3.99	\$4.16	\$4.34	\$4.55	\$4.77	\$5.03	\$5.29	\$5.58	\$5.87	\$6.19		
Alliant Energy Corporation	LNT	\$1.99	\$2.11	\$2.24	\$2.37	\$2.51	\$2.66	\$2.82	\$2.99	\$3.16	\$3.34	\$3.53	\$3.72	\$3.91	\$4.12	\$4.34	\$4.57	\$4.82		
Ameren Corporation	AEE	\$2.77	\$2.96	\$3.16	\$3.37	\$3.60	\$3.85	\$4.11	\$4.38	\$4.66	\$4.94	\$5.23	\$5.52	\$5.81	\$6.12	\$6.44	\$6.79	\$7.15		
American Electric Power Company, Inc.	AEP	\$3.62	\$3.78	\$3.95	\$4.13	\$4.32	\$4.51	\$4.71	\$4.93	\$5.17	\$5.42	\$5.70	\$5.99	\$6.31	\$6.64	\$7.00	\$7.37	\$7.76		
Avangrid, Inc.	AGR	\$1.67	\$1.82	\$1.97	\$2.14	\$2.33	\$2.53	\$2.75	\$2.98	\$3.20	\$3.43	\$3.65	\$3.86	\$4.07	\$4.29	\$4.51	\$4.75	\$5.01		
Black Hills Corporation	BKH	\$3.38	\$3.53	\$3.69	\$3.85	\$4.02	\$4.20	\$4.39	\$4.59	\$4.81	\$5.05	\$5.30	\$5.58	\$5.87	\$6.18	\$6.51	\$6.86	\$7.22		
CMS Energy Corporation	CMS	\$2.17	\$2.31	\$2.46	\$2.61	\$2.78	\$2.96	\$3.15	\$3.34	\$3.55	\$3.75	\$3.97	\$4.19	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42		
DTE Energy Company	DTE	\$5.73	\$6.04	\$6.38	\$6.73	\$7.10	\$7.49	\$7.90	\$8.33	\$8.78	\$9.25	\$9.75	\$10.27	\$10.82	\$11.39	\$12.00	\$12.64	\$13.31		
El Paso Electric Company	EE	\$2.42	\$2.49	\$2.57	\$2.64	\$2.72	\$2.81	\$2.89	\$2.99	\$3.10	\$3.23	\$3.38	\$3.54	\$3.73	\$3.93	\$4.14	\$4.36	\$4.59		
Evergy, Inc.	EVRG	NA	\$2.50	\$2.70	\$2.91	\$3.13	\$3.38	\$3.64	\$3.91	\$4.18	\$4.45	\$4.73	\$5.00	\$5.27	\$5.55	\$5.84	\$6.15	\$6.48		
Hawaiian Electric Industries, Inc.	HE	\$1.64	\$1.70	\$1.76	\$1.82	\$1.88	\$1.95	\$2.02	\$2.09	\$2.18	\$2.27	\$2.38	\$2.50	\$2.63	\$2.77	\$2.92	\$3.08	\$3.24		
NextEra Energy, Inc.	NEE	\$6.50	\$6.98	\$7.50	\$8.06	\$8.66	\$9.31	\$10.00	\$10.71	\$11.44	\$12.17	\$12.90	\$13.63	\$14.36	\$15.12	\$15.92	\$16.77	\$17.66		
NorthWestern Corporation	NWE	\$3.34	\$3.42	\$3.51	\$3.60	\$3.69	\$3.78	\$3.87	\$3.99	\$4.13	\$4.29	\$4.47	\$4.69	\$4.94	\$5.20	\$5.48	\$5.77	\$6.08		
OGE Energy Corp.	OGE	\$1.92	\$2.02	\$2.12	\$2.24	\$2.35	\$2.47	\$2.60	\$2.74	\$2.88	\$3.03	\$3.19	\$3.36	\$3.54	\$3.73	\$3.93	\$4.14	\$4.36		
Otter Tail Corporation	OTTR	\$1.86	\$2.03	\$2.21	\$2.41	\$2.63	\$2.86	\$3.12	\$3.38	\$3.64	\$3.90	\$4.16	\$4.41	\$4.64	\$4.89	\$5.15	\$5.42	\$5.71		
Pinnacle West Capital Corporation	PNW	\$4.43	\$4.61	\$4.81	\$5.01	\$5.21	\$5.43	\$5.66	\$5.90	\$6.17	\$6.46	\$6.78	\$7.13	\$7.51	\$7.91	\$8.33	\$8.77	\$9.24		
PNM Resources, Inc.	PNM	\$1.92	\$2.00	\$2.08	\$2.17	\$2.25	\$2.35	\$2.44	\$2.55	\$2.66	\$2.79	\$2.93	\$3.08	\$3.24	\$3.41	\$3.59	\$3.78	\$3.98		
Portland General Electric Company	POR	\$2.29	\$2.37	\$2.44	\$2.52	\$2.61	\$2.69	\$2.78	\$2.88	\$3.00	\$3.13	\$3.27	\$3.44	\$3.62	\$3.81	\$4.01	\$4.23	\$4.45		
Southern Company	SO	\$3.21	\$3.26	\$3.32	\$3.37	\$3.43	\$3.49	\$3.55	\$3.63	\$3.73	\$3.86	\$4.02	\$4.21	\$4.44	\$4.67	\$4.92	\$5.18	\$5.46		
Wisconsin Energy Corporation	WEC	\$3.14	\$3.28	\$3.42	\$3.57	\$3.73	\$3.89	\$4.07	\$4.25	\$4.45	\$4.67	\$4.90	\$5.15	\$5.43	\$5.72	\$6.02	\$6.34	\$6.68		
Xcel Energy Inc.	XEL	\$2.30	\$2.43	\$2.56	\$2.70	\$2.85	\$3.01	\$3.17	\$3.34	\$3.53	\$3.72	\$3.92	\$4.13	\$4.35	\$4.58	\$4.82	\$5.08	\$5.35		

Projected Annual Dividend Payout Ratio		[31]	[32]	[33]	[34]	[35]	[36]	[37]	[38]	[39]	[40]	[41]	[42]	[43]	[44]	[45]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
ALLETE, Inc.	ALE	66.00%	66.00%	66.00%	66.00%	65.94%	65.88%	65.82%	65.75%	65.69%	65.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Alliant Energy Corporation	LNT	63.00%	63.33%	63.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Ameren Corporation	AEE	58.00%	58.33%	58.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
American Electric Power Company, Inc.	AEP	68.00%	67.00%	66.00%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Avangrid, Inc.	AGR	70.00%	69.00%	68.00%	67.00%	66.80%	66.59%	66.39%	66.18%	65.98%	65.77%	65.57%	65.57%	65.57%	65.57%	65.57%
Black Hills Corporation	BKH	59.00%	58.33%	57.67%	57.00%	58.22%	59.45%	60.67%	61.90%	63.12%	64.35%	65.57%	65.57%	65.57%	65.57%	65.57%
CMS Energy Corporation	CMS	60.00%	59.67%	59.33%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
DTE Energy Company	DTE	61.00%	60.33%	59.67%	59.00%	59.94%	60.88%	61.82%	62.75%	63.69%	64.63%	65.57%	65.57%	65.57%	65.57%	65.57%
El Paso Electric Company	EE	61.00%	62.33%	63.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Evergy, Inc.	EVRG	69.00%	67.67%	66.33%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Hawaiian Electric Industries, Inc.	HE	61.00%	61.33%	61.67%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
NextEra Energy, Inc.	NEE	59.00%	59.67%	60.33%	61.00%	61.65%	62.31%	62.96%	63.61%	64.26%	64.92%	65.57%	65.57%	65.57%	65.57%	65.57%
NorthWestern Corporation	NWE	65.00%	66.00%	67.00%	68.00%	67.65%	67.31%	66.96%	66.61%	66.26%	65.92%	65.57%	65.57%	65.57%	65.57%	65.57%
OGE Energy Corp.	OGE	71.00%	71.00%	71.00%	71.00%	70.22%	69.45%	68.67%	67.90%	67.12%	66.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Otter Tail Corporation	OTTR	60.00%	58.33%	56.67%	55.00%	56.51%	58.02%	59.53%	61.04%	62.55%	64.06%	65.57%	65.57%	65.57%	65.57%	65.57%
Pinnacle West Capital Corporation	PNW	62.00%	62.00%	62.00%	62.00%	62.51%	63.02%	63.53%	64.04%	64.55%	65.06%	65.57%	65.57%	65.57%	65.57%	65.57%
PNM Resources, Inc.	PNM	50.00%	50.00%	50.00%	50.00%	52.22%	54.45%	56.67%	58.90%	61.12%	63.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Portland General Electric Company	POR	60.00%	61.33%	62.67%	64.00%	64.22%	64.45%	64.67%	64.90%	65.12%	65.35%	65.57%	65.57%	65.57%	65.57%	65.57%
Southern Company	SO	78.00%	76.33%	74.67%	73.00%	71.94%	70.88%	69.82%	68.75%	67.69%	66.63%	65.57%	65.57%	65.57%	65.57%	65.57%
Wisconsin Energy Corporation	WEC	67.00%	66.33%	65.67%	65.00%	65.08%	65.16%	65.24%	65.33%	65.41%	65.49%	65.57%	65.57%	65.57%	65.57%	65.57%
Xcel Energy Inc.	XEL	61.00%	61.67%	62.33%	63.00%	63.37%	63.73%	64.10%	64.47%	64.84%	65.20%	65.57%	65.57%	65.57%	65.57%	65.57%

Projected Annual Cash Flows		[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]	[61]
Company	Ticker	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Terminal Value
ALLETE, Inc.	ALE	\$2.21	\$2.29	\$2.37	\$2.45	\$2.54	\$2.63	\$2.74	\$2.85	\$2.99	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$4.06	\$157.58
Alliant Energy Corporation	LNT	\$1.41	\$1.50	\$1.60	\$1.70	\$1.81	\$1.93	\$2.04	\$2.17	\$2.30	\$2.43	\$2.57	\$2.70	\$2.85	\$3.00	\$3.16	\$90.35
Ameren Corporation	AEE	\$1.83	\$1.97	\$2.11	\$2.27	\$2.46	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.81	\$4.01	\$4.23	\$4.45	\$4.69	\$138.07
American Electric Power Company, Inc.	AEP	\$2.69	\$2.77	\$2.85	\$2.93	\$3.07	\$3.21	\$3.37	\$3.54	\$3.73	\$3.92	\$4.14	\$4.36	\$4.59	\$4.83	\$5.09	\$150.25
Avangrid, Inc.	AGR	\$1.38	\$1.48	\$1.59	\$1.70	\$1.84	\$1.98	\$2.13	\$2.27	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$3.28	\$105.29
Black Hills Corporation	BKH	\$2.18	\$2.25	\$2.32	\$2.40	\$2.56	\$2.73	\$2.92	\$3.12	\$3.35	\$3.59	\$3.85	\$4.05	\$4.27	\$4.50	\$4.74	\$130.79
CMS Energy Corporation	CMS	\$1.47	\$1.56	\$1.65	\$1.75	\$1.89	\$2.04	\$2.19	\$2.36	\$2.53	\$2.71	\$2.89	\$3.04	\$3.21	\$3.38	\$3.56	\$105.07
DTE Energy Company	DTE	\$3.89	\$4.06	\$4.23	\$4.42	\$4.73	\$5.07	\$5.43	\$5.81	\$6.21	\$6.64	\$7.09	\$7.47	\$7.87	\$8.29	\$8.73	\$235.01
El Paso Electric Company	EE	\$1.57	\$1.65	\$1.73	\$1.82	\$1.88	\$1.95	\$2.02	\$2.11	\$2.21	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$3.01	\$118.21
Evergy, Inc.	EVRG	\$1.86	\$1.97	\$2.08	\$2.19	\$2.37	\$2.55	\$2.73	\$2.91	\$3.09	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$4.25	\$119.52
Hawaiian Electric Industries, Inc.	HE	\$1.07	\$1.12	\$1.16	\$1.21	\$1.26	\$1.32	\$1.38	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.92	\$2.02	\$2.13	\$74.64
NextEra Energy, Inc.	NEE	\$4.43	\$4.81	\$5.23	\$5.68	\$6.17	\$6.67	\$7.20	\$7.74	\$8.29	\$8.85	\$9.41	\$9.91	\$10.44	\$11.00	\$11.58	\$367.66
NorthWestern Corporation	NWE	\$2.28	\$2.37	\$2.47	\$2.57	\$2.62	\$2.68	\$2.76	\$2.86	\$2.97	\$3.09	\$3.24	\$3.41	\$3.59	\$3.78	\$3.99	\$121.39
OGE Energy Corp.	OGE	\$1.51	\$1.59	\$1.67	\$1.76	\$1.83	\$1.90	\$1.98	\$2.06	\$2.14	\$2.23	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$76.38
Otter Tail Corporation	OTTR	\$1.33	\$1.41	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$3.74	\$104.79
Pinnacle West Capital Corporation	PNW	\$2.98	\$3.10	\$3.23	\$3.37	\$3.54	\$3.72	\$3.92	\$4.14	\$4.38	\$4.64	\$4.92	\$5.19	\$5.46	\$5.75	\$6.06	\$172.90
PNM Resources, Inc.	PNM	\$1.04	\$1.08	\$1.13	\$1.17	\$1.28	\$1.39	\$1.51	\$1.64	\$1.79	\$1.95	\$2.12	\$2.24	\$2.36	\$2.48	\$2.61	\$86.56
Portland General Electric Company	POR	\$1.47	\$1.55	\$1.63	\$1.72	\$1.79	\$1.86	\$1.94	\$2.03	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$2.92	\$94.54
Southern Company	SO	\$2.59	\$2.58	\$2.56	\$2.55	\$2.55	\$2.57	\$2.61	\$2.66	\$2.72	\$2.81	\$2.91	\$3.06	\$3.23	\$3.40	\$3.58	\$88.67
Wisconsin Energy Corporation	WEC	\$2.29	\$2.37	\$2.45	\$2.53	\$2.65	\$2.77	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	\$3.95	\$4.16	\$4.38	\$140.61
Xcel Energy Inc.	XEL	\$1.56	\$1.67	\$1.78	\$1.89	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.85	\$3.00	\$3.16	\$3.33	\$3.51	\$101.83

Projected Annual Data		[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
Investor Cash Flows		Initial																
Company	Ticker	Outflow	2/15/19	12/31/19	6/30/20	6/30/21	6/30/22	6/30/23	6/30/24	6/30/25	6/30/26	6/30/27	6/30/28	6/30/29	6/30/30	6/30/31	6/30/32	6/30/33
ALLETE, Inc.	ALE	(\$76.55)	\$0.00	\$1.93	\$2.25	\$2.37	\$2.45	\$2.54	\$2.63	\$2.74	\$2.85	\$2.99	\$3.13	\$3.30	\$3.47	\$3.66	\$3.85	\$161.64
Alliant Energy Corporation	LNT	(\$43.06)	\$0.00	\$1.23	\$1.45	\$1.60	\$1.70	\$1.81	\$1.93	\$2.04	\$2.17	\$2.30	\$2.43	\$2.57	\$2.70	\$2.85	\$3.00	\$93.50
Ameren Corporation	AEE	(\$64.47)	\$0.00	\$1.60	\$1.89	\$2.11	\$2.27	\$2.46	\$2.67	\$2.88	\$3.10	\$3.33	\$3.57	\$3.81	\$4.01	\$4.23	\$4.45	\$142.75
American Electric Power Company, Inc.	AEP	(\$72.93)	\$0.00	\$2.35	\$2.75	\$2.85	\$2.93	\$3.07	\$3.21	\$3.37	\$3.54	\$3.73	\$3.92	\$4.14	\$4.36	\$4.59	\$4.83	\$155.34
Avangrid, Inc.	AGR	(\$49.90)	\$0.00	\$1.21	\$1.44	\$1.59	\$1.70	\$1.84	\$1.98	\$2.13	\$2.27	\$2.41	\$2.54	\$2.67	\$2.81	\$2.96	\$3.12	\$108.58
Black Hills Corporation	BKH	(\$61.83)	\$0.00	\$1.90	\$2.22	\$2.32	\$2.40	\$2.56	\$2.73	\$2.92	\$3.12	\$3.35	\$3.59	\$3.85	\$4.05	\$4.27	\$4.50	\$135.52
CMS Energy Corporation	CMS	(\$49.29)	\$0.00	\$1.29	\$1.52	\$1.65	\$1.75	\$1.89	\$2.04	\$2.19	\$2.36	\$2.53	\$2.71	\$2.89	\$3.04	\$3.21	\$3.38	\$108.62
DTE Energy Company	DTE	(\$111.00)	\$0.00	\$3.40	\$4.00	\$4.23	\$4.42	\$4.73	\$5.07	\$5.43	\$5.81	\$6.21	\$6.64	\$7.09	\$7.47	\$7.87	\$8.29	\$243.74
El Paso Electric Company	EE	(\$57.24)	\$0.00	\$1.37	\$1.59	\$1.73	\$1.82	\$1.88	\$1.95	\$2.02	\$2.11	\$2.21	\$2.32	\$2.45	\$2.58	\$2.71	\$2.86	\$121.22
Evergy, Inc.	EVRG	(\$56.71)	\$0.00	\$1.63	\$1.93	\$2.08	\$2.19	\$2.37	\$2.55	\$2.73	\$2.91	\$3.09	\$3.27	\$3.45	\$3.64	\$3.83	\$4.03	\$123.77
Hawaiian Electric Industries, Inc.	HE	(\$35.90)	\$0.00	\$0.94	\$1.09	\$1.16	\$1.21	\$1.26	\$1.32	\$1.38	\$1.46	\$1.54	\$1.63	\$1.73	\$1.82	\$1.92	\$2.02	\$76.76
NextEra Energy, Inc.	NEE	(\$171.99)	\$0.00	\$3.87	\$4.59	\$5.23	\$5.68	\$6.17	\$6.67	\$7.20	\$7.74	\$8.29	\$8.85	\$9.41	\$9.91	\$10.44	\$11.00	\$379.24
NorthWestern Corporation	NWE	(\$59.97)	\$0.00	\$1.99	\$2.31	\$2.47	\$2.57	\$2.62	\$2.68	\$2.76	\$2.86	\$2.97	\$3.09	\$3.24	\$3.41	\$3.59	\$3.78	\$125.38
OGE Energy Corp.	OGE	(\$37.55)	\$0.00	\$1.32	\$1.55	\$1.67	\$1.76	\$1.83	\$1.90	\$1.98	\$2.06	\$2.14	\$2.23	\$2.32	\$2.45	\$2.58	\$2.71	\$79.23
Otter Tail Corporation	OTTR	(\$47.91)	\$0.00	\$1.16	\$1.39	\$1.49	\$1.57	\$1.76	\$1.96	\$2.17	\$2.38	\$2.60	\$2.82	\$3.04	\$3.21	\$3.38	\$3.56	\$108.53
Pinnacle West Capital Corporation	PNW	(\$83.10)	\$0.00	\$2.60	\$3.04	\$3.23	\$3.37	\$3.54	\$3.72	\$3.92	\$4.14	\$4.38	\$4.64	\$4.92	\$5.19	\$5.46	\$5.75	\$178.96
PNM Resources, Inc.	PNM	(\$40.10)	\$0.00	\$0.91	\$1.06	\$1.13	\$1.17	\$1.28	\$1.39	\$1.51	\$1.64	\$1.79	\$1.95	\$2.12	\$2.24	\$2.36	\$2.48	\$89.18
Portland General Electric Company	POR	(\$45.72)	\$0.00	\$1.28	\$1.49	\$1.63	\$1.72	\$1.79	\$1.86	\$1.94	\$2.03	\$2.13	\$2.25	\$2.37	\$2.50	\$2.63	\$2.77	\$97.45
Southern Company	SO	(\$45.92)	\$0.00	\$2.26	\$2.61	\$2.56	\$2.55	\$2.55	\$2.57	\$2.61	\$2.66	\$2.72	\$2.81	\$2.91	\$3.06	\$3.23	\$3.40	\$92.25
Wisconsin Energy Corporation	WEC	(\$68.11)	\$0.00	\$2.00	\$2.34	\$2.45	\$2.53	\$2.65	\$2.77	\$2.90	\$3.05	\$3.21	\$3.38	\$3.56	\$3.75	\$3.95	\$4.16	\$144.99
Xcel Energy Inc.	XEL	(\$48.50)	\$0.00	\$1.36	\$1.60	\$1.78	\$1.89	\$2.01	\$2.13	\$2.26	\$2.40	\$2.54	\$2.69	\$2.85	\$3.00	\$3.16	\$3.33	\$105.33

Multi-Stage DCF Notes:

- [1] Source: Bloomberg; based on 30-, 90-, and 180-day historical average as of February 15, 2019
[2] Source: Zacks
[3] Source: Yahoo! Finance
[4] Source: Value Line
[5] Equals indicated value (average, minimum, maximum) of Columns [2], [3], [4]
[6] Source: Federal Reserve, Bureau of Economic Analysis, Blue Chip Financial Forecast
[7] Source: Value Line
[8] Source: Value Line
[9] Source: Bloomberg Professional
[10] Equals Column [1] + Column [62]
[11] Equals result of Excel Solver function; goal: Column [10] equals \$0.00
[12] Equals Column [61] / Column [30]
[13] Equals Column [12] / (Column [6] x 100)
[14] Source: Value Line; EVRG's 2017 EPS is unavailable.
[15] Equals Column [14] x (1 + Column [5]); Value Line's projected 2018 EPS is used as the basis for expected EPS for EVRG.
[16] Equals Column [15] x (1 + Column [5])
[17] Equals Column [16] x (1 + Column [5])
[18] Equals Column [17] x (1 + Column [5])
[19] Equals Column [18] x (1 + Column [5])
[20] Equals Column [19] x (1 + Column [5])
[21] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2029 - 2024 + 1)) x (2024 - 2023)))) x Column [19]
[22] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2029 - 2024 + 1)) x (2025 - 2023)))) x Column [20]
[23] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2029 - 2024 + 1)) x (2026 - 2023)))) x Column [21]
[24] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2029 - 2024 + 1)) x (2027 - 2023)))) x Column [22]
[25] Equals (1 + (Column [5] + (((Column [6] - Column [5]) / (2029 - 2024 + 1)) x (2028 - 2023)))) x Column [23]
[26] Equals Column [25] x (1 + Column [6])
[27] Equals Column [26] x (1 + Column [6])
[28] Equals Column [27] x (1 + Column [6])
[29] Equals Column [28] x (1 + Column [6])
[30] Equals Column [29] x (1 + Column [6])
[31] Equals Column [7]
[32] Equals Column [31] + ((Column [34] - Column [31]) / 3)
[33] Equals Column [32] + ((Column [34] - Column [31]) / 3)
[34] Equals Column [8]
[35] Equals Column [34] + ((Column [41] - Column [34]) / 7)
[36] Equals Column [35] + ((Column [41] - Column [34]) / 7)
[37] Equals Column [36] + ((Column [41] - Column [34]) / 7)
[38] Equals Column [37] + ((Column [41] - Column [34]) / 7)
[39] Equals Column [38] + ((Column [41] - Column [34]) / 7)
[40] Equals Column [39] + ((Column [41] - Column [34]) / 7)
[41] Equals Column [9]
[42] Equals Column [9]
[43] Equals Column [9]
[44] Equals Column [9]
[45] Equals Column [9]
[46] Equals Column [16] x Column [31]
[47] Equals Column [17] x Column [32]
[48] Equals Column [18] x Column [33]
[49] Equals Column [19] x Column [34]
[50] Equals Column [20] x Column [35]
[51] Equals Column [21] x Column [36]
[52] Equals Column [22] x Column [37]
[53] Equals Column [23] x Column [38]
[54] Equals Column [24] x Column [39]
[55] Equals Column [25] x Column [40]
[56] Equals Column [26] x Column [41]
[57] Equals Column [27] x Column [42]
[58] Equals Column [28] x Column [43]
[59] Equals Column [29] x Column [44]
[60] Equals Column [30] x Column [45]
[61] Equals (Column [60] x (1 + Column [6])) / (Column [11] - Column [6])
[62] Equals negative net present value; discount rate equals Column [11], cash flows equal Column [63] through Column [78]
[63] Equals \$0.00
[64] Equals Column [46] x (12/31/2019 - 2/15/2019) / 365
[65] Equals Column [46] x (1 + (0.5 x Column [5]))
[66] Equals Column [48]
[67] Equals Column [49]
[68] Equals Column [50]
[69] Equals Column [51]
[70] Equals Column [52]
[71] Equals Column [53]
[72] Equals Column [54]
[73] Equals Column [55]
[74] Equals Column [56]
[75] Equals Column [57]
[76] Equals Column [58]
[77] Equals Column [59]
[78] Equals Column [60] + [61]

Ex-Ante Market Risk Premium
Market DCF Method Based - Bloomberg

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
13.75%	3.03%	10.72%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Agilent Technologies Inc	A	24,869.29	0.10%	0.86%	9.50%	10.40%	0.0105%
American Airlines Group Inc	AAL	16,143.38	0.07%	1.16%	15.20%	16.45%	0.0108%
Advance Auto Parts Inc	AAP	12,391.20	0.05%	0.14%	17.37%	17.52%	0.0088%
Apple Inc	AAPL	803,578.02	3.27%	1.72%	9.40%	11.20%	0.3660%
AbbVie Inc	ABBV	121,615.89	0.49%	5.34%	8.81%	14.39%	0.0712%
AmerisourceBergen Corp	ABC	18,293.05	0.07%	1.85%	8.42%	10.36%	0.0077%
ABIOMED Inc	ABMD	16,323.77	0.07%	0.00%	29.00%	29.00%	0.0192%
Abbott Laboratories	ABT	132,164.06	0.54%	1.63%	11.69%	13.41%	0.0721%
Accenture PLC	ACN	101,653.74	0.41%	1.84%	10.27%	12.20%	0.0504%
Adobe Inc	ADBE	126,540.49	0.51%	0.00%	16.75%	16.75%	0.0862%
Analog Devices Inc	ADI	39,049.76	0.16%	1.86%	8.43%	10.37%	0.0165%
Archer-Daniels-Midland Co	ADM	23,535.85	0.10%	3.38%	1.40%	4.80%	0.0046%
Automatic Data Processing Inc	ADP	65,200.69	0.27%	1.93%	14.00%	16.07%	0.0426%
Alliance Data Systems Corp	ADS	9,435.36	0.04%	1.44%	4.43%	5.90%	0.0023%
Autodesk Inc	ADSK	35,118.07	0.14%	0.00%	54.78%	54.78%	0.0782%
Ameren Corp	AEE	17,004.71	0.07%	2.79%	6.70%	9.59%	0.0066%
American Electric Power Co Inc	AEP	39,088.74	0.16%	3.39%	5.96%	9.45%	0.0150%
AES Corp/VA	AES	11,206.07	0.05%	3.07%	8.66%	11.86%	0.0054%
Aflac Inc	AFL	37,220.49	0.15%	2.22%	3.43%	5.69%	0.0086%
Allergan PLC	AGN	46,256.69	0.19%	2.14%	7.11%	9.32%	0.0175%
American International Group Inc	AIG	36,796.66	0.15%	3.20%	11.00%	14.38%	0.0215%
Apartment Investment & Management Co	AIV	7,366.79	0.03%	3.27%	-2.74%	0.49%	0.0001%
Assurant Inc	AIZ	6,094.32	N/A	2.54%	N/A	N/A	N/A
Arthur J Gallagher & Co	AJG	14,695.35	0.06%	2.15%	10.17%	12.43%	0.0074%
Akamai Technologies Inc	AKAM	11,415.28	0.05%	0.00%	16.57%	16.57%	0.0077%
Albemarle Corp	ALB	8,641.97	0.04%	1.65%	9.81%	11.54%	0.0041%
Align Technology Inc	ALGN	20,392.82	0.08%	0.00%	23.19%	23.19%	0.0192%
Alaska Air Group Inc	ALK	8,165.08	0.03%	2.04%	5.60%	7.69%	0.0026%
Allstate Corp/The	ALL	31,330.68	0.13%	2.05%	7.10%	9.23%	0.0118%
Allegion PLC	ALLE	8,703.31	0.04%	0.92%	11.97%	12.95%	0.0046%
Alexion Pharmaceuticals Inc	ALXN	28,921.41	0.12%	0.00%	16.74%	16.74%	0.0197%
Applied Materials Inc	AMAT	37,295.79	0.15%	2.20%	9.23%	11.53%	0.0175%
Advanced Micro Devices Inc	AMD	23,805.48	0.10%	0.00%	15.67%	15.67%	0.0152%
AMETEK Inc	AME	18,339.48	0.07%	0.73%	8.84%	9.60%	0.0072%
Affiliated Managers Group Inc	AMG	5,739.24	0.02%	1.27%	4.37%	5.67%	0.0013%
Amgen Inc	AMGN	117,199.84	0.48%	3.02%	6.16%	9.28%	0.0442%
Ameriprise Financial Inc	AMP	17,811.68	0.07%	2.91%	11.80%	14.88%	0.0108%
American Tower Corp	AMT	78,327.55	0.32%	1.76%	15.19%	17.09%	0.0544%
Amazon.com Inc	AMZN	789,829.69	3.21%	0.00%	37.60%	37.60%	1.2075%
Arista Networks Inc	ANET	19,909.04	0.08%	0.00%	21.64%	21.64%	0.0175%
ANSYS Inc	ANSS	14,580.39	0.06%	0.00%	12.20%	12.20%	0.0072%
Anthem Inc	ANTM	80,587.70	0.33%	0.99%	11.14%	12.18%	0.0399%
Aon PLC	AON	41,417.96	0.17%	0.99%	10.90%	11.95%	0.0201%
AO Smith Corp	AOS	8,671.01	0.04%	1.67%	9.33%	11.08%	0.0039%
Apache Corp	APA	12,638.80	0.05%	5.50%	-5.19%	0.17%	0.0001%
Anadarko Petroleum Corp	APC	22,595.82	0.09%	2.60%	23.31%	26.21%	0.0241%
Air Products & Chemicals Inc	APD	38,233.39	0.16%	2.64%	12.30%	15.10%	0.0235%
Amphenol Corp	APH	27,629.70	0.11%	0.96%	10.64%	11.65%	0.0131%
Aptiv PLC	APT	21,049.80	0.09%	1.14%	10.66%	11.86%	0.0101%
Alexandria Real Estate Equities Inc	ARE	15,202.55	0.06%	2.91%	4.80%	7.78%	0.0048%
Arconic Inc	ARNC	8,480.90	0.03%	0.57%	14.40%	15.01%	0.0052%
Atmos Energy Corp	ATO	11,344.89	0.05%	2.16%	6.50%	8.73%	0.0040%
Activision Blizzard Inc	ATVI	34,032.06	0.14%	0.83%	6.65%	7.51%	0.0104%
AvalonBay Communities Inc	AVB	27,101.30	0.11%	3.11%	5.38%	8.58%	0.0095%
Broadcom Inc	AVGO	114,821.89	0.47%	3.47%	13.15%	16.85%	0.0787%
Avery Dennison Corp	AVY	9,095.91	0.04%	2.01%	5.75%	7.82%	0.0029%
American Water Works Co Inc	AWK	17,707.71	0.07%	1.79%	8.45%	10.31%	0.0074%
American Express Co	AXP	90,560.93	0.37%	1.50%	14.99%	16.60%	0.0611%
AutoZone Inc	AZO	23,182.41	0.09%	0.00%	12.80%	12.80%	0.0121%
Boeing Co/The	BA	236,146.83	0.96%	1.90%	16.70%	18.76%	0.1801%
Bank of America Corp	BAC	281,472.93	1.14%	2.36%	9.70%	12.17%	0.1393%
Baxter International Inc	BAX	39,075.11	0.16%	1.14%	12.20%	13.41%	0.0213%
BB&T Corp	BBT	38,717.33	0.16%	3.37%	9.85%	13.38%	0.0211%
Best Buy Co Inc	BBY	16,194.53	0.07%	2.99%	11.10%	14.26%	0.0094%
Becton Dickinson and Co	BDX	66,819.20	0.27%	1.27%	12.41%	13.76%	0.0374%
Franklin Resources Inc	BEN	16,533.61	0.07%	3.15%	10.00%	13.31%	0.0089%
Brown-Forman Corp	BF/B	23,403.56	0.10%	1.34%	9.86%	11.27%	0.0107%
Brighthouse Financial Inc	BHF	4,930.48	0.02%	0.00%	11.14%	11.14%	0.0022%
Baker Hughes a GE Co	BHGE	26,732.47	0.11%	2.62%	40.82%	43.97%	0.0478%
Biogen Inc	BIIB	65,478.45	0.27%	0.00%	5.08%	5.08%	0.0135%
Bank of New York Mellon Corp/The	BK	50,892.97	0.21%	2.28%	7.33%	9.69%	0.0201%
Booking Holdings Inc	BKNG	89,581.50	0.36%	0.00%	15.78%	15.78%	0.0575%
BlackRock Inc	BLK	68,541.37	0.28%	3.07%	9.69%	12.91%	0.0360%
Ball Corp	BLL	18,360.49	0.07%	0.74%	6.50%	7.26%	0.0054%
Bristol-Myers Squibb Co	BMJ	84,349.45	0.34%	3.19%	12.78%	16.17%	0.0555%
Broadridge Financial Solutions Inc	BR	11,608.57	0.05%	1.91%	10.00%	12.00%	0.0057%
Berkshire Hathaway Inc	BRK/B	505,680.48	2.06%	0.00%	-5.60%	-5.60%	-0.1151%
Boston Scientific Corp	BSX	55,365.87	0.23%	0.00%	33.46%	33.46%	0.0753%
BorgWarner Inc	BWA	8,730.79	0.04%	1.65%	5.84%	7.53%	0.0027%
Boston Properties Inc	BXP	20,638.74	0.08%	2.91%	6.46%	9.46%	0.0079%
Citigroup Inc	C	156,956.13	0.64%	3.03%	11.07%	14.26%	0.0910%
Conagra Brands Inc	CAG	11,898.23	0.05%	3.43%	8.00%	11.57%	0.0056%
Cardinal Health Inc	CAH	16,533.96	0.07%	3.51%	15.67%	19.46%	0.0131%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Caterpillar Inc	CAT	78,388.92	0.32%	2.58%	13.35%	16.10%	0.0513%
Chubb Ltd	CB	61,170.48	0.25%	2.28%	10.00%	12.39%	0.0308%
Cboe Global Markets Inc	CBOE	10,495.37	0.04%	1.40%	13.46%	14.95%	0.0064%
CBRE Group Inc	CBRE	17,057.65	0.07%	0.00%	8.55%	8.55%	0.0059%
CBS Corp	CBS	18,946.57	0.08%	1.55%	14.79%	16.45%	0.0127%
Crown Castle International Corp	CCI	49,853.95	0.20%	3.82%	15.50%	19.61%	0.0398%
Carnival Corp	CCL	39,358.41	0.16%	3.60%	10.93%	14.73%	0.0236%
Cadence Design Systems Inc	CDNS	14,835.03	0.06%	0.00%	10.90%	10.90%	0.0066%
Celanese Corp	CE	12,843.32	0.05%	2.35%	7.05%	9.48%	0.0050%
Celgene Corp	CELG	63,504.65	0.26%	0.00%	20.70%	20.70%	0.0534%
Cerner Corp	CERN	18,783.74	0.08%	0.00%	12.93%	12.93%	0.0099%
CF Industries Holdings Inc	CF	9,640.16	0.04%	2.89%	19.75%	22.92%	0.0090%
Citizens Financial Group Inc	CFG	17,102.49	0.07%	3.67%	16.69%	20.66%	0.0144%
Church & Dwight Co Inc	CHD	15,928.79	0.06%	1.42%	8.21%	9.69%	0.0063%
CH Robinson Worldwide Inc	CHRW	12,574.78	0.05%	2.21%	9.07%	11.38%	0.0058%
Charter Communications Inc	CHTR	87,671.16	0.36%	0.00%	41.16%	41.16%	0.1467%
Cigna Corp	CI	75,373.43	0.31%	0.01%	14.10%	14.12%	0.0433%
Cincinnati Financial Corp	CINF	13,910.82	N/A	2.72%	N/A	N/A	N/A
Colgate-Palmolive Co	CL	57,659.43	0.23%	2.60%	6.24%	8.92%	0.0209%
Clorox Co/The	CLX	20,029.52	0.08%	2.49%	4.91%	7.46%	0.0061%
Comerica Inc	CMA	13,732.87	0.06%	3.02%	16.41%	19.68%	0.0110%
Comcast Corp	CMCSA	170,945.60	0.70%	2.22%	11.03%	13.37%	0.0929%
CME Group Inc	CME	62,751.25	0.26%	2.99%	13.40%	16.59%	0.0423%
Chipotle Mexican Grill Inc	CMG	16,758.48	0.07%	0.00%	20.31%	20.31%	0.0138%
Cummins Inc	CMI	24,461.47	0.10%	2.98%	6.81%	9.89%	0.0098%
CMS Energy Corp	CMS	14,955.02	0.06%	2.90%	6.61%	9.60%	0.0058%
Centene Corp	CNC	26,798.70	0.11%	0.00%	13.68%	13.68%	0.0149%
CenterPoint Energy Inc	CNP	15,481.72	0.06%	3.63%	6.90%	10.66%	0.0067%
Capital One Financial Corp	COF	38,150.29	0.16%	2.03%	4.54%	6.61%	0.0102%
Cabot Oil & Gas Corp	COG	10,878.67	0.04%	1.01%	33.27%	34.44%	0.0152%
Cooper Cos Inc/The	COO	13,769.08	0.06%	0.02%	10.50%	10.52%	0.0059%
ConocoPhillips	COP	80,794.16	0.33%	1.76%	6.00%	7.82%	0.0257%
Costco Wholesale Corp	COST	95,352.97	0.39%	1.09%	10.58%	11.72%	0.0454%
Coty Inc	COTY	8,293.88	0.03%	4.53%	8.76%	13.49%	0.0045%
Campbell Soup Co	CPB	10,472.80	0.04%	4.08%	3.16%	7.31%	0.0031%
Capri Holdings Ltd	CPRI	6,705.02	0.03%	0.00%	6.73%	6.73%	0.0018%
Copart Inc	CPRT	12,643.86	0.05%	0.00%	10.00%	10.00%	0.0051%
salesforce.com Inc	CRM	121,673.25	0.49%	0.00%	23.98%	23.98%	0.1186%
Cisco Systems Inc	CSCO	222,235.39	0.90%	2.76%	6.84%	9.70%	0.0876%
CSX Corp	CSX	59,165.83	0.24%	1.26%	10.47%	11.80%	0.0284%
Cintas Corp	CTAS	21,305.00	0.09%	0.99%	12.11%	13.15%	0.0114%
CenturyLink Inc	CTL	14,848.26	0.06%	11.11%	-15.21%	-4.94%	-0.0030%
Cognizant Technology Solutions Corp	CTSH	42,444.12	0.17%	1.02%	11.40%	12.47%	0.0215%
Citrix Systems Inc	CTXS	14,027.48	0.06%	0.00%	11.85%	11.85%	0.0068%
CVS Health Corp	CVS	89,908.88	0.37%	2.89%	11.30%	14.36%	0.0525%
Chevron Corp	CVX	228,050.92	0.93%	3.95%	6.36%	10.43%	0.0967%
Concho Resources Inc	CXO	24,624.77	0.10%	0.00%	31.00%	31.00%	0.0310%
Dominion Energy Inc	D	58,374.14	0.24%	5.00%	5.72%	10.87%	0.0258%
Delta Air Lines Inc	DAL	34,680.77	0.14%	2.86%	13.07%	16.11%	0.0227%
Deere & Co	DE	50,857.82	0.21%	1.83%	10.39%	12.32%	0.0255%
Discover Financial Services	DFS	23,596.99	0.10%	2.31%	8.80%	11.21%	0.0108%
Dollar General Corp	DG	31,283.24	0.13%	0.97%	15.00%	16.04%	0.0204%
Quest Diagnostics Inc	DGX	11,854.35	0.05%	2.38%	7.88%	10.35%	0.0050%
DR Horton Inc	DHI	14,925.72	0.06%	1.51%	11.80%	13.40%	0.0081%
Danaher Corp	DHR	77,489.78	0.32%	0.60%	10.00%	10.63%	0.0335%
Walt Disney Co/The	DIS	167,846.56	0.68%	1.58%	3.76%	5.37%	0.0367%
Discovery Inc	DISCA	20,510.35	0.08%	0.00%	12.30%	12.30%	0.0103%
DISH Network Corp	DISH	14,457.62	0.06%	0.00%	-20.68%	-20.68%	-0.0122%
Digital Realty Trust Inc	DLR	24,962.26	0.10%	3.72%	18.00%	22.06%	0.0224%
Dollar Tree Inc	DLTR	23,523.33	0.10%	0.00%	9.96%	9.96%	0.0095%
Dover Corp	DOV	13,345.54	0.05%	2.18%	10.97%	13.27%	0.0072%
Duke Realty Corp	DRE	10,670.75	0.04%	2.90%	4.50%	7.46%	0.0032%
Darden Restaurants Inc	DRI	13,847.84	0.06%	2.68%	10.31%	13.13%	0.0074%
DTE Energy Co	DTE	21,796.44	0.09%	3.17%	5.87%	9.13%	0.0081%
Duke Energy Corp	DUK	63,619.77	0.26%	4.32%	5.00%	9.43%	0.0244%
DaVita Inc	DVA	9,833.49	0.04%	0.00%	16.56%	16.56%	0.0066%
Devon Energy Corp	DEVN	13,306.24	0.05%	1.06%	10.92%	12.03%	0.0065%
DowDuPont Inc	DWDP	122,298.29	0.50%	2.90%	6.17%	9.15%	0.0455%
DXC Technology Co	DXC	17,561.03	0.07%	1.17%	6.50%	7.71%	0.0055%
Electronic Arts Inc	EA	32,008.79	0.13%	3.10%	11.87%	15.15%	0.0197%
eBay Inc	EBAY	33,466.33	0.14%	0.70%	10.67%	11.41%	0.0155%
Ecolab Inc	ECL	47,224.97	0.19%	1.00%	13.20%	14.27%	0.0274%
Consolidated Edison Inc	ED	25,524.60	0.10%	3.65%	3.73%	7.44%	0.0077%
Equifax Inc	EFX	13,180.06	0.05%	1.43%	6.60%	8.08%	0.0043%
Edison International	EIX	19,711.58	0.08%	4.01%	5.34%	9.46%	0.0076%
Estee Lauder Cos Inc/The	EL	55,983.80	0.23%	1.07%	11.80%	12.93%	0.0294%
Eastman Chemical Co	EMN	11,582.88	0.05%	2.87%	6.73%	9.70%	0.0046%
Emerson Electric Co	EMR	41,984.68	0.17%	2.88%	8.95%	11.95%	0.0204%
EOG Resources Inc	EOG	58,135.28	0.24%	0.80%	11.06%	11.90%	0.0281%
Equinix Inc	EQIX	33,875.75	0.14%	2.37%	19.40%	22.00%	0.0303%
Equity Residential	EQR	27,044.15	0.11%	3.05%	6.31%	9.46%	0.0104%
Eversource Energy	ES	22,245.38	0.09%	2.89%	5.62%	8.59%	0.0078%
Essex Property Trust Inc	ESS	18,420.27	0.07%	2.79%	6.02%	8.89%	0.0067%
E*TRADE Financial Corp	ETFC	11,698.66	0.05%	1.05%	12.08%	13.19%	0.0063%
Eaton Corp PLC	ETN	34,121.58	0.14%	3.64%	9.23%	13.03%	0.0181%
Entergy Corp	ETR	16,277.44	0.07%	4.00%	-0.69%	3.29%	0.0022%
Evergy Inc	EVRG	15,483.26	0.06%	2.79%	8.66%	11.58%	0.0073%
Edwards Lifesciences Corp	EW	36,936.70	0.15%	0.00%	14.00%	14.00%	0.0210%
Exelon Corp	EXC	46,614.66	0.19%	3.00%	4.12%	7.18%	0.0136%
Expeditors International of Washington I	EXPD	12,709.53	0.05%	1.20%	9.60%	10.86%	0.0056%
Expedia Group Inc	EXPE	18,706.42	0.08%	1.03%	17.20%	18.32%	0.0139%
Extra Space Storage Inc	EXR	12,616.11	0.05%	3.35%	5.34%	8.78%	0.0045%
Ford Motor Co	F	33,971.29	0.14%	6.84%	-5.41%	1.25%	0.0017%
Diamondback Energy Inc	FANG	17,310.99	0.07%	0.41%	15.26%	15.70%	0.0111%
Fastenal Co	FAST	18,005.11	0.07%	2.70%	14.85%	17.76%	0.0130%
Facebook Inc	FB	463,773.34	1.89%	0.00%	21.88%	21.88%	0.4126%
Fortune Brands Home & Security Inc	FBHS	6,702.59	0.03%	1.77%	9.97%	11.82%	0.0032%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Freeport-McMoRan Inc	FCX	17,794.44	0.07%	1.83%	-12.55%	-10.83%	-0.0078%
FedEx Corp	FDX	46,805.12	0.19%	1.43%	14.30%	15.84%	0.0301%
FirstEnergy Corp	FE	20,248.12	0.08%	3.64%	-0.02%	3.62%	0.0030%
F5 Networks Inc	FFIV	10,181.11	0.04%	0.00%	9.39%	9.39%	0.0039%
Fidelity National Information Services I	FIS	35,673.30	0.15%	1.29%	12.00%	13.36%	0.0194%
Fiserv Inc	FISV	34,180.82	0.14%	0.00%	7.40%	7.40%	0.0103%
Fifth Third Bancorp	FITB	17,568.96	0.07%	3.57%	3.95%	7.59%	0.0054%
Foot Locker Inc	FL	6,693.26	0.03%	2.30%	6.24%	8.61%	0.0023%
FLIR Systems Inc	FLIR	7,250.82	N/A	1.30%	N/A	N/A	N/A
Fluor Corp	FLR	5,107.67	0.02%	2.31%	19.23%	21.77%	0.0045%
Flowserve Corp	FLS	6,252.35	0.03%	1.61%	20.07%	21.84%	0.0056%
FleetCor Technologies Inc	FLT	19,233.65	0.08%	0.00%	16.50%	16.50%	0.0129%
FMC Corp	FMC	11,493.05	0.05%	1.62%	10.27%	11.97%	0.0056%
Twenty-First Century Fox Inc	FOXA	93,285.81	0.38%	0.79%	2.66%	3.46%	0.0131%
First Republic Bank/CA	FRC	16,936.76	0.07%	0.75%	12.39%	13.18%	0.0091%
Federal Realty Investment Trust	FRT	10,075.08	0.04%	3.08%	4.25%	7.39%	0.0030%
TechnipFMC PLC	FTI	10,624.12	0.04%	2.26%	5.58%	7.90%	0.0034%
Fortinet Inc	FTNT	14,159.47	0.06%	0.00%	22.10%	22.10%	0.0127%
Fortive Corp	FTV	27,362.10	0.11%	0.37%	12.93%	13.32%	0.0148%
General Dynamics Corp	GD	50,510.46	0.21%	2.25%	10.09%	12.46%	0.0256%
General Electric Co	GE	87,763.98	0.36%	0.40%	1.60%	2.00%	0.0071%
Gilead Sciences Inc	GILD	86,650.38	0.35%	3.71%	-1.48%	2.20%	0.0078%
General Mills Inc	GIS	26,877.57	0.11%	4.38%	6.43%	10.95%	0.0120%
Corning Inc	GLW	27,151.12	0.11%	2.31%	10.39%	12.82%	0.0141%
General Motors Co	GM	55,096.53	0.22%	3.91%	11.77%	15.91%	0.0356%
Alphabet Inc	GOOGL	776,123.64	3.16%	0.00%	15.22%	15.22%	0.4804%
Genuine Parts Co	GPC	15,789.83	0.06%	2.64%	5.62%	8.34%	0.0054%
Global Payments Inc	GPN	19,476.71	0.08%	0.03%	14.67%	14.70%	0.0116%
Gap Inc/The	GPS	9,562.55	0.04%	3.87%	8.63%	12.66%	0.0049%
Garmin Ltd	GRMN	13,522.50	0.05%	2.93%	6.03%	9.05%	0.0050%
Goldman Sachs Group Inc/The	GS	76,735.17	0.31%	1.71%	7.27%	9.04%	0.0282%
Goodyear Tire & Rubber Co/The	GT	4,362.99	N/A	3.44%	N/A	N/A	N/A
WW Grainger Inc	GWV	17,832.18	0.07%	1.80%	12.47%	14.38%	0.0104%
Halliburton Co	HAL	27,790.49	0.11%	2.19%	30.08%	32.60%	0.0368%
Hasbro Inc	HAS	10,930.25	0.04%	3.15%	8.98%	12.26%	0.0054%
Huntington Bancshares Inc/OH	HBAN	14,665.85	0.06%	4.23%	8.20%	12.60%	0.0075%
Hanesbrands Inc	HBI	6,783.93	0.03%	3.34%	3.72%	7.11%	0.0020%
HCA Healthcare Inc	HCA	49,648.59	0.20%	0.94%	11.56%	12.56%	0.0253%
HCP Inc	HCP	14,734.48	0.06%	4.82%	2.47%	7.35%	0.0044%
Home Depot Inc/The	HD	217,309.84	0.88%	2.14%	13.01%	15.29%	0.1351%
Hess Corp	HES	17,058.26	0.07%	1.76%	-9.49%	-7.81%	-0.0054%
HollyFrontier Corp	HFC	10,030.75	0.04%	2.30%	7.07%	9.45%	0.0039%
Hartford Financial Services Group Inc/Th	HIG	17,503.82	0.07%	2.55%	9.50%	12.18%	0.0087%
Huntington Ingalls Industries Inc	HI	9,124.12	0.04%	1.55%	40.00%	41.86%	0.0155%
Hilton Worldwide Holdings Inc	HLT	23,940.27	0.10%	0.81%	10.74%	11.59%	0.0113%
Harley-Davidson Inc	HOG	6,073.66	0.02%	4.20%	8.97%	13.35%	0.0033%
Hologic Inc	HOLX	13,484.96	0.05%	0.00%	3.10%	3.10%	0.0017%
Honeywell International Inc	HON	111,783.45	0.45%	2.17%	13.06%	15.37%	0.0699%
Helmerich & Payne Inc	HP	6,279.87	0.03%	4.96%	96.36%	103.70%	0.0265%
Hewlett Packard Enterprise Co	HPE	22,155.32	0.09%	2.90%	4.86%	7.83%	0.0071%
HP Inc	HPQ	36,165.35	0.15%	2.73%	6.06%	8.87%	0.0130%
H&R Block Inc	HRB	4,953.22	0.02%	4.16%	10.00%	14.37%	0.0029%
Hormel Foods Corp	HRL	23,094.53	0.09%	1.93%	5.80%	7.78%	0.0073%
Harris Corp	HRS	19,418.35	0.08%	1.64%	7.00%	8.69%	0.0069%
Henry Schein Inc	HSIC	9,510.59	0.04%	0.00%	7.53%	7.53%	0.0029%
Host Hotels & Resorts Inc	HST	13,832.04	0.06%	4.46%	4.57%	9.13%	0.0051%
Hershey Co/The	HSY	22,942.48	0.09%	2.70%	8.00%	10.81%	0.0101%
Humana Inc	HUM	42,066.34	0.17%	0.63%	14.11%	14.79%	0.0253%
International Business Machines Corp	IBM	125,440.81	0.51%	4.71%	3.59%	8.38%	0.0428%
Intercontinental Exchange Inc	ICE	42,921.60	0.17%	1.42%	8.02%	9.50%	0.0166%
IDEXX Laboratories Inc	IDXX	18,083.73	0.07%	0.00%	18.21%	18.21%	0.0134%
International Flavors & Fragrances Inc	IFF	14,074.80	0.06%	2.15%	9.00%	11.24%	0.0064%
Illumina Inc	ILMN	44,073.54	0.18%	0.00%	25.16%	25.16%	0.0451%
Incyte Corp	INCY	18,012.17	0.07%	0.00%	47.53%	47.53%	0.0348%
IHS Markit Ltd	INFO	21,226.97	0.09%	0.00%	11.21%	11.21%	0.0097%
Intel Corp	INTC	232,315.02	0.94%	2.44%	8.54%	11.09%	0.1047%
Intuit Inc	INTU	60,554.77	0.25%	0.79%	15.87%	16.72%	0.0412%
International Paper Co	IP	19,097.09	0.08%	4.28%	6.08%	10.48%	0.0081%
Interpublic Group of Cos Inc/The	IPG	8,986.14	0.04%	3.98%	8.53%	12.67%	0.0046%
IPG Photonics Corp	IPGP	8,199.60	0.03%	0.00%	9.24%	9.24%	0.0031%
IQVIA Holdings Inc	IQV	28,015.38	0.11%	0.00%	15.23%	15.23%	0.0173%
Ingersoll-Rand PLC	IR	25,362.32	0.10%	2.08%	9.92%	12.11%	0.0125%
Iron Mountain Inc	IRM	10,057.16	0.04%	7.02%	7.16%	14.43%	0.0059%
Intuitive Surgical Inc	ISRG	62,797.00	0.26%	0.00%	12.95%	12.95%	0.0331%
Gartner Inc	IT	13,018.77	0.05%	0.00%	14.02%	14.02%	0.0074%
Illinois Tool Works Inc	ITW	47,316.51	0.19%	2.78%	7.90%	10.79%	0.0208%
Invesco Ltd	IVZ	7,757.79	0.03%	6.58%	4.30%	11.02%	0.0035%
JB Hunt Transport Services Inc	JBHT	12,401.34	0.05%	0.89%	18.78%	19.75%	0.0100%
Johnson Controls International plc	JCI	32,036.23	0.13%	3.07%	7.63%	10.82%	0.0141%
Jacobs Engineering Group Inc	JEC	9,587.60	0.04%	0.84%	13.57%	14.46%	0.0056%
Jefferies Financial Group Inc	JEF	6,790.99	N/A	2.38%	N/A	N/A	N/A
Jack Henry & Associates Inc	JKHY	10,325.46	0.04%	1.15%	11.00%	12.21%	0.0051%
Johnson & Johnson	JNJ	365,768.16	1.49%	2.79%	7.26%	10.15%	0.1510%
Juniper Networks Inc	JNPR	9,360.59	0.04%	2.78%	8.63%	11.53%	0.0044%
JPMorgan Chase & Co	JPM	350,997.10	1.43%	3.20%	9.33%	12.68%	0.1810%
Nordstrom Inc	JWN	7,435.87	0.03%	3.38%	10.55%	14.10%	0.0043%
Kellogg Co	K	19,707.33	0.08%	4.15%	3.68%	7.91%	0.0063%
KeyCorp	KEY	17,851.50	0.07%	4.23%	13.17%	17.68%	0.0128%
Keysight Technologies Inc	KEYS	15,086.18	0.06%	0.00%	17.00%	17.00%	0.0104%
Kraft Heinz Co/The	KHC	58,069.49	0.24%	5.32%	3.30%	8.71%	0.0206%
Kimco Realty Corp	KIM	7,483.81	0.03%	6.36%	3.86%	10.34%	0.0031%
KLA-Tencor Corp	KLAC	16,376.07	0.07%	2.76%	7.15%	10.00%	0.0067%
Kimberly-Clark Corp	KMB	40,794.48	0.17%	3.47%	6.09%	9.66%	0.0160%
Kinder Morgan Inc/DE	KMI	42,556.74	0.17%	5.29%	10.00%	15.56%	0.0269%
CarMax Inc	KMX	10,555.61	0.04%	0.00%	12.92%	12.92%	0.0055%
Coca-Cola Co/The	KO	192,564.69	0.78%	3.64%	6.72%	10.48%	0.0821%
Kroger Co/The	KR	23,533.42	0.10%	1.84%	6.43%	8.34%	0.0080%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Kohl's Corp	KSS	10,886.98	0.04%	3.70%	10.60%	14.50%	0.0064%
Kansas City Southern	KSU	10,855.25	0.04%	1.42%	8.97%	10.45%	0.0046%
Loews Corp	L	14,537.68	N/A	0.60%	N/A	N/A	N/A
L Brands Inc	LB	7,521.92	0.03%	8.80%	10.72%	19.99%	0.0061%
Leggett & Platt Inc	LEG	5,862.28	0.02%	3.43%	10.00%	13.60%	0.0032%
Lennar Corp	LEN	15,491.69	0.06%	0.33%	12.74%	13.09%	0.0082%
Laboratory Corp of America Holdings	LH	15,152.15	0.06%	0.00%	7.61%	7.61%	0.0047%
Linde PLC	LIN	92,033.63	0.37%	1.81%	19.10%	21.09%	0.0789%
LKQ Corp	LKQ	8,639.20	0.04%	0.00%	13.85%	13.85%	0.0049%
L3 Technologies Inc	LLL	16,702.77	0.07%	1.56%	10.49%	12.13%	0.0082%
Eli Lilly & Co	LLY	129,745.79	0.53%	2.03%	10.72%	12.86%	0.0678%
Lockheed Martin Corp	LMT	86,811.69	0.35%	2.91%	7.61%	10.63%	0.0375%
Lincoln National Corp	LNC	13,160.19	0.05%	2.43%	9.00%	11.54%	0.0062%
Alliant Energy Corp	LNT	10,993.85	0.04%	2.98%	6.49%	9.57%	0.0043%
Lowe's Cos Inc	LOW	83,700.24	0.34%	1.74%	15.17%	17.04%	0.0580%
Lam Research Corp	LRCX	27,633.15	0.11%	2.24%	-0.42%	1.82%	0.0020%
Southwest Airlines Co	LUV	31,890.15	0.13%	1.20%	10.73%	12.00%	0.0156%
Lamb Weston Holdings Inc	LW	10,182.66	0.04%	1.14%	11.02%	12.22%	0.0051%
LyondellBasell Industries NV	LYB	32,952.64	0.13%	4.64%	6.80%	11.60%	0.0155%
Macy's Inc	M	7,649.78	0.03%	6.16%	-0.17%	5.99%	0.0019%
Mastercard Inc	MA	227,864.66	0.93%	0.52%	16.68%	17.24%	0.1598%
Mid-America Apartment Communities Inc	MAA	11,859.62	0.05%	3.70%	7.00%	10.83%	0.0052%
Macerich Co/The	MAC	6,162.51	0.03%	6.94%	2.39%	9.41%	0.0024%
Marriott International Inc/MD	MAR	41,293.82	0.17%	1.29%	12.10%	13.47%	0.0226%
Masco Corp	MAS	11,031.69	0.04%	1.27%	12.50%	13.85%	0.0062%
Mattel Inc	MAT	4,769.98	0.02%	0.00%	10.00%	10.00%	0.0019%
McDonald's Corp	MCD	138,740.72	0.56%	2.60%	8.74%	11.45%	0.0646%
Microchip Technology Inc	MCHP	21,587.87	0.09%	1.60%	12.39%	14.09%	0.0124%
McKesson Corp	MCK	26,003.83	0.11%	1.09%	7.96%	9.09%	0.0096%
Moody's Corp	MCO	32,430.22	0.13%	1.15%	12.80%	14.02%	0.0185%
Mondelez International Inc	MDLZ	69,551.20	0.28%	2.17%	7.33%	9.58%	0.0271%
Medtronic PLC	MDT	123,922.80	0.50%	2.15%	7.94%	10.18%	0.0513%
MettLife Inc	MET	43,002.80	0.17%	3.90%	8.46%	12.53%	0.0219%
MGM Resorts International	MGM	15,145.09	0.06%	1.79%	3.32%	5.15%	0.0032%
Mohawk Industries Inc	MHK	10,329.24	0.04%	0.00%	7.59%	7.59%	0.0032%
McCormick & Co Inc/MD	MKC	16,985.21	0.07%	1.78%	6.10%	7.93%	0.0055%
Martin Marietta Materials Inc	MLM	11,919.06	0.05%	1.03%	13.29%	14.39%	0.0070%
Marsh & McLennan Cos Inc	MMC	45,918.03	0.19%	1.92%	11.80%	13.83%	0.0258%
3M Co	MMM	120,261.59	0.49%	2.75%	7.70%	10.55%	0.0516%
Monster Beverage Corp	MNST	32,470.02	0.13%	0.00%	15.40%	15.40%	0.0203%
Altria Group Inc	MO	91,341.57	0.37%	6.73%	8.50%	15.52%	0.0576%
Mosaic Co/The	MOS	12,377.44	0.05%	0.31%	7.00%	7.32%	0.0037%
Marathon Petroleum Corp	MPC	45,009.11	0.18%	3.21%	16.14%	19.61%	0.0359%
Merck & Co Inc	MRK	207,536.05	0.84%	2.76%	8.33%	11.20%	0.0945%
Marathon Oil Corp	MRO	14,198.19	0.06%	1.17%	0.45%	1.62%	0.0009%
Morgan Stanley	MS	71,383.00	0.29%	3.12%	13.50%	16.83%	0.0488%
MSCI Inc	MSCI	14,749.31	0.06%	1.28%	13.10%	14.46%	0.0087%
Microsoft Corp	MSFT	830,286.94	3.38%	1.65%	11.68%	13.43%	0.4533%
Motorola Solutions Inc	MSI	22,717.48	0.09%	1.67%	4.10%	5.80%	0.0054%
M&T Bank Corp	MTB	24,179.42	0.10%	2.49%	10.45%	13.07%	0.0128%
Mettler-Toledo International Inc	MTD	16,584.54	0.07%	0.00%	12.66%	12.66%	0.0085%
Micron Technology Inc	MU	47,072.76	0.19%	0.34%	-3.30%	-2.97%	-0.0057%
Maxim Integrated Products Inc	MXIM	15,269.30	0.06%	3.29%	8.93%	12.37%	0.0077%
Mylan NV	MYL	16,417.71	0.07%	0.00%	6.01%	6.01%	0.0040%
Noble Energy Inc	NBL	10,862.65	0.04%	1.88%	25.48%	27.59%	0.0122%
Norwegian Cruise Line Holdings Ltd	NCLH	11,665.33	0.05%	0.00%	12.82%	12.82%	0.0061%
Nasdaq Inc	NDAQ	14,388.87	0.06%	2.11%	8.16%	10.36%	0.0061%
NextEra Energy Inc	NEE	87,961.05	0.36%	2.71%	7.90%	10.72%	0.0383%
Newmont Mining Corp	NEM	17,770.60	0.07%	1.67%	-3.00%	-1.36%	-0.0010%
Netflix Inc	NFLX	155,808.94	0.63%	0.00%	36.80%	36.80%	0.2331%
NISource Inc	NI	10,086.21	0.04%	2.87%	5.54%	8.49%	0.0035%
NIKE Inc	NKE	134,370.83	0.55%	0.99%	18.34%	19.42%	0.1061%
Nektar Therapeutics	NKTR	7,215.92	N/A	0.00%	N/A	N/A	N/A
Nielsen Holdings PLC	NLSN	9,341.96	N/A	5.27%	N/A	N/A	N/A
Northrop Grumman Corp	NOC	48,711.27	0.20%	1.81%	8.89%	10.78%	0.0214%
National Oilwell Varco Inc	NOV	11,430.15	0.05%	0.73%	77.76%	78.78%	0.0366%
NRG Energy Inc	NRG	12,310.43	0.05%	0.28%	46.03%	46.38%	0.0232%
Norfolk Southern Corp	NSC	48,909.56	0.20%	1.86%	9.13%	11.07%	0.0220%
NetApp Inc	NTAP	16,128.26	0.07%	2.44%	13.23%	15.83%	0.0104%
Northern Trust Corp	NTRS	20,609.69	0.08%	2.63%	12.53%	15.32%	0.0128%
Nucor Corp	NUE	18,678.99	0.08%	2.67%	0.85%	3.53%	0.0027%
NVIDIA Corp	NVDA	95,977.40	0.39%	0.43%	7.86%	8.30%	0.0324%
Newell Brands Inc	NWL	8,010.29	0.03%	5.10%	1.98%	7.13%	0.0023%
News Corp	NWSA	7,494.12	0.03%	1.68%	-9.13%	-7.52%	-0.0023%
Realty Income Corp	O	20,684.71	0.08%	3.75%	6.59%	10.47%	0.0088%
ONEOK Inc	OKE	27,853.29	0.11%	4.84%	23.23%	28.63%	0.0324%
Omnicom Group Inc	OMC	16,776.81	0.07%	3.45%	5.22%	8.76%	0.0060%
Oracle Corp	ORCL	185,618.89	0.75%	1.48%	7.54%	9.07%	0.0685%
O'Reilly Automotive Inc	ORLY	30,669.04	0.12%	0.00%	15.58%	15.58%	0.0194%
Occidental Petroleum Corp	OXY	50,730.19	0.21%	4.66%	-0.50%	4.15%	0.0086%
Paychex Inc	PAYX	27,211.93	0.11%	3.01%	9.25%	12.40%	0.0137%
People's United Financial Inc	PBCT	6,546.11	0.03%	4.12%	2.00%	6.16%	0.0016%
PACCAR Inc	PCAR	23,603.46	0.10%	3.98%	6.10%	10.21%	0.0098%
Public Service Enterprise Group Inc	PEG	28,466.93	0.12%	3.19%	6.64%	9.94%	0.0115%
PepsiCo Inc	PEP	162,817.17	0.66%	3.36%	6.68%	10.15%	0.0672%
Pfizer Inc	PFE	245,092.12	1.00%	3.40%	5.45%	8.94%	0.0891%
Principal Financial Group Inc	PFG	14,135.55	0.06%	4.39%	4.16%	8.64%	0.0050%
Procter & Gamble Co/The	PG	246,355.57	1.00%	2.95%	6.60%	9.64%	0.0966%
Progressive Corp/The	PGR	41,608.71	0.17%	1.99%	8.00%	10.07%	0.0170%
Parker-Hannifin Corp	PH	22,465.59	0.09%	1.73%	9.52%	11.33%	0.0104%
PulteGroup Inc	PHM	7,516.09	0.03%	1.62%	7.17%	8.84%	0.0027%
Packaging Corp of America	PKG	9,305.15	0.04%	3.12%	8.25%	11.50%	0.0044%
PerkinElmer Inc	PKI	10,455.37	0.04%	0.31%	15.49%	15.82%	0.0067%
Prologis Inc	PLD	44,815.14	0.18%	2.82%	6.87%	9.78%	0.0178%
Philip Morris International Inc	PM	129,745.61	0.53%	5.61%	9.06%	14.93%	0.0787%
PNC Financial Services Group Inc/The	PNC	56,736.55	0.23%	3.30%	7.37%	10.78%	0.0249%
Pentair PLC	PNR	7,416.24	0.03%	1.86%	10.22%	12.17%	0.0037%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Pinnacle West Capital Corp	PNW	10,082.69	0.04%	3.16%	4.99%	8.22%	0.0034%
PPG Industries Inc	PPG	26,173.83	0.11%	1.77%	7.49%	9.33%	0.0099%
PPL Corp	PPL	21,941.04	0.09%	5.53%	6.17%	11.87%	0.0106%
Perrigo Co PLC	PRGO	6,650.18	0.03%	1.51%	1.17%	2.68%	0.0007%
Prudential Financial Inc	PRU	38,507.35	0.16%	4.24%	9.00%	13.43%	0.0210%
Public Storage	PSA	36,222.48	0.15%	3.85%	4.45%	8.39%	0.0124%
Phillips 66	PSX	44,263.42	0.18%	3.58%	5.70%	9.39%	0.0169%
PVH Corp	PVH	8,550.51	0.03%	0.14%	11.03%	11.17%	0.0039%
Quanta Services Inc	PWR	5,239.44	0.02%	0.00%	25.00%	25.00%	0.0053%
Pioneer Natural Resources Co	PXD	24,776.66	0.10%	0.29%	26.85%	27.18%	0.0274%
PayPal Holdings Inc	PYPL	111,349.30	0.45%	0.00%	22.12%	22.12%	0.1002%
QUALCOMM Inc	QCOM	62,911.69	0.26%	4.86%	11.71%	16.86%	0.0431%
Qorvo Inc	QRVO	8,000.90	0.03%	0.00%	11.83%	11.83%	0.0038%
Royal Caribbean Cruises Ltd	RCL	24,657.73	0.10%	2.37%	11.72%	14.22%	0.0143%
Everest Re Group Ltd	RE	8,818.42	0.04%	2.55%	10.00%	12.67%	0.0045%
Regency Centers Corp	REG	11,248.46	0.05%	3.45%	6.04%	9.59%	0.0044%
Regeneron Pharmaceuticals Inc	REGN	46,330.25	0.19%	0.00%	13.90%	13.90%	0.0262%
Regions Financial Corp	RF	16,541.92	0.07%	3.78%	14.52%	18.58%	0.0125%
Robert Half International Inc	RHI	7,975.88	0.03%	1.82%	13.20%	15.13%	0.0049%
Red Hat Inc	RHT	31,990.11	0.13%	0.00%	18.40%	18.40%	0.0239%
Raymond James Financial Inc	RJF	11,611.66	0.05%	1.57%	12.30%	13.97%	0.0066%
Ralph Lauren Corp	RL	9,834.82	0.04%	1.95%	6.84%	8.86%	0.0035%
ResMed Inc	RMD	14,394.49	0.06%	1.49%	12.50%	14.09%	0.0082%
Rockwell Automation Inc	ROK	21,205.90	0.09%	2.19%	8.44%	10.72%	0.0092%
Rollins Inc	ROL	13,128.74	0.05%	1.96%	10.00%	12.05%	0.0064%
Roper Technologies Inc	ROP	32,266.29	0.13%	0.58%	11.13%	11.75%	0.0154%
Ross Stores Inc	ROST	34,839.05	0.14%	0.96%	10.50%	11.51%	0.0163%
Republic Services Inc	RSG	24,967.01	0.10%	1.94%	9.98%	12.02%	0.0122%
Raytheon Co	RTN	52,104.14	0.21%	2.01%	10.03%	12.14%	0.0257%
SBA Communications Corp	SBAC	21,021.13	0.09%	0.00%	45.90%	45.90%	0.0392%
Starbucks Corp	SBUX	87,934.96	0.36%	2.11%	13.22%	15.47%	0.0553%
Charles Schwab Corp/The	SCHW	62,606.99	0.25%	1.32%	19.78%	21.23%	0.0540%
Sealed Air Corp	SEE	6,614.39	0.03%	1.57%	6.04%	7.66%	0.0021%
Sherwin-Williams Co/The	SHW	41,118.81	0.17%	0.97%	10.74%	11.76%	0.0197%
SVB Financial Group	SIVB	12,986.24	0.05%	0.01%	11.00%	11.01%	0.0058%
JM Smucker Co/The	SJM	11,760.32	0.05%	3.24%	2.99%	6.27%	0.0030%
Schlumberger Ltd	SLB	62,164.25	0.25%	4.47%	33.69%	38.92%	0.0984%
SL Green Realty Corp	SLG	7,759.15	0.03%	3.72%	-0.59%	3.13%	0.0010%
Snap-on Inc	SNA	8,775.11	0.04%	2.39%	7.93%	10.41%	0.0037%
Synopsys Inc	SNPS	15,198.20	0.06%	0.00%	15.20%	15.20%	0.0094%
Southern Co/The	SO	49,246.45	0.20%	4.92%	3.38%	8.37%	0.0168%
Simon Property Group Inc	SPG	56,663.01	0.23%	4.51%	4.70%	9.32%	0.0215%
S&P Global Inc	SPGI	49,302.35	0.20%	1.13%	11.05%	12.25%	0.0245%
Sempra Energy	SRE	31,542.08	0.13%	3.11%	9.96%	13.22%	0.0170%
SunTrust Banks Inc	STI	28,805.28	0.12%	3.27%	9.18%	12.60%	0.0148%
State Street Corp	STT	26,847.04	0.11%	2.86%	8.69%	11.68%	0.0127%
Seagate Technology PLC	STX	12,878.34	0.05%	5.51%	2.88%	8.47%	0.0044%
Constellation Brands Inc	STZ	33,211.33	0.14%	1.69%	8.64%	10.40%	0.0140%
Stanley Black & Decker Inc	SWK	20,603.09	0.08%	1.96%	10.50%	12.57%	0.0105%
Skyworks Solutions Inc	SWKS	14,513.51	0.06%	1.87%	8.87%	10.82%	0.0064%
Synchrony Financial	SYF	22,538.13	0.09%	2.84%	6.20%	9.13%	0.0084%
Stryker Corp	SYK	69,624.93	0.28%	1.20%	8.64%	9.90%	0.0280%
Symantec Corp	SYMC	14,797.88	0.06%	1.32%	7.50%	8.87%	0.0053%
Sysco Corp	SY	34,679.27	0.14%	2.24%	12.53%	14.91%	0.0210%
AT&T Inc	T	221,882.54	0.90%	6.71%	4.99%	11.87%	0.1070%
Molson Coors Brewing Co	TAP	13,190.49	0.05%	3.36%	0.26%	3.62%	0.0019%
TransDigm Group Inc	TDG	23,279.51	0.09%	0.00%	11.79%	11.79%	0.0112%
TE Connectivity Ltd	TEL	27,833.50	0.11%	2.16%	11.18%	13.46%	0.0152%
Teleflex Inc	TFX	13,145.83	0.05%	0.48%	12.95%	13.46%	0.0072%
Target Corp	TGT	38,010.36	0.15%	3.54%	6.44%	10.09%	0.0156%
Tiffany & Co	TIF	11,071.92	0.05%	2.36%	10.53%	13.01%	0.0059%
TJX Cos Inc/The	TJX	61,940.89	0.25%	1.52%	11.18%	12.77%	0.0322%
Torchmark Corp	TMK	9,298.01	0.04%	0.81%	7.53%	8.37%	0.0032%
Thermo Fisher Scientific Inc	TMO	101,646.51	0.41%	0.28%	11.00%	11.30%	0.0467%
Tapestry Inc	TPR	10,413.11	0.04%	3.78%	10.33%	14.31%	0.0061%
TripAdvisor Inc	TRIP	7,834.17	0.03%	0.00%	10.16%	10.16%	0.0032%
T Rowe Price Group Inc	TROW	23,054.60	0.09%	3.09%	4.27%	7.43%	0.0070%
Travelers Cos Inc/The	TRV	33,908.96	0.14%	2.50%	17.69%	20.41%	0.0281%
Tractor Supply Co	TSCO	11,911.40	0.05%	1.37%	12.09%	13.53%	0.0066%
Tyson Foods Inc	TSN	22,869.39	N/A	2.52%	N/A	N/A	N/A
Total System Services Inc	TSS	16,926.92	0.07%	0.57%	12.14%	12.75%	0.0088%
Take-Two Interactive Software Inc	TTWO	10,558.01	0.04%	3.32%	10.30%	13.79%	0.0059%
Twitter Inc	TWTR	23,773.85	0.10%	0.00%	37.35%	37.35%	0.0361%
Texas Instruments Inc	TXN	103,325.64	0.42%	2.92%	10.48%	13.54%	0.0569%
Textron Inc	TXT	12,865.11	0.05%	0.16%	12.56%	12.72%	0.0067%
Under Armour Inc	UAA	8,971.16	0.04%	0.00%	34.93%	34.93%	0.0127%
United Continental Holdings Inc	UAL	24,061.33	0.10%	0.00%	14.17%	14.17%	0.0139%
UDR Inc	UDR	12,286.59	0.05%	3.03%	5.60%	8.71%	0.0044%
Universal Health Services Inc	UHS	12,538.20	0.05%	0.28%	9.82%	10.12%	0.0052%
Ulta Beauty Inc	ULTA	18,170.87	0.07%	0.00%	19.00%	19.00%	0.0140%
UnitedHealth Group Inc	UNH	260,159.68	1.06%	1.33%	13.73%	15.15%	0.1602%
Unum Group	UNM	7,792.56	0.03%	2.95%	9.00%	12.08%	0.0038%
Union Pacific Corp	UNP	123,062.72	0.50%	2.06%	13.86%	16.07%	0.0804%
United Parcel Service Inc	UPS	95,126.46	0.39%	3.43%	9.71%	13.31%	0.0515%
United Rentals Inc	URI	10,733.65	0.04%	0.00%	17.76%	17.76%	0.0078%
US Bancorp	USB	82,506.48	0.34%	3.08%	7.83%	11.03%	0.0370%
United Technologies Corp	UTX	110,097.03	0.45%	2.33%	9.80%	12.25%	0.0548%
Visa Inc	V	290,888.98	1.18%	0.69%	15.59%	16.34%	0.1932%
Varian Medical Systems Inc	VAR	12,049.81	0.05%	0.00%	16.10%	16.10%	0.0079%
VF Corp	VFC	34,378.11	0.14%	2.08%	-16.64%	-14.74%	-0.0206%
Viacom Inc	VIAB	12,016.92	0.05%	2.77%	3.67%	6.48%	0.0032%
Valero Energy Corp	VLO	35,811.62	0.15%	4.24%	19.17%	23.82%	0.0347%
Vulcan Materials Co	VMC	14,939.89	0.06%	1.09%	15.34%	16.52%	0.0100%
Vornado Realty Trust	VNO	13,108.84	0.05%	3.77%	2.95%	6.77%	0.0036%
Verisk Analytics Inc	VRSK	20,640.07	0.08%	0.00%	12.91%	12.91%	0.0108%
VeriSign Inc	VRSN	20,998.00	0.09%	0.00%	8.80%	8.80%	0.0075%
Vertex Pharmaceuticals Inc	VRTX	48,081.39	0.20%	0.00%	49.41%	49.41%	0.0966%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Ventas Inc	VTR	23,256.97	0.09%	4.92%	2.29%	7.27%	0.0069%
Verizon Communications Inc	VZ	227,923.65	0.93%	4.42%	2.30%	6.77%	0.0627%
Waters Corp	WAT	17,776.76	0.07%	0.00%	11.10%	11.10%	0.0080%
Walgreens Boots Alliance Inc	WBA	69,277.15	0.28%	2.43%	9.77%	12.32%	0.0347%
WellCare Health Plans Inc	WCG	13,956.03	0.06%	0.00%	17.08%	17.08%	0.0097%
Western Digital Corp	WDC	13,859.05	0.06%	4.20%	2.72%	6.97%	0.0039%
WEC Energy Group Inc	WEC	23,497.01	0.10%	3.15%	4.89%	8.12%	0.0078%
Welltower Inc	WELL	29,153.76	0.12%	4.56%	6.69%	11.40%	0.0135%
Wells Fargo & Co	WFC	225,491.59	0.92%	3.70%	11.26%	15.16%	0.1390%
Whirlpool Corp	WHR	8,859.07	0.04%	3.41%	5.75%	9.26%	0.0033%
Willis Towers Watson PLC	WLTW	22,032.38	0.09%	1.52%	10.00%	11.59%	0.0104%
Waste Management Inc	WM	41,979.60	0.17%	2.03%	9.73%	11.86%	0.0202%
Williams Cos Inc/The	WMB	33,012.08	0.13%	5.60%	3.90%	9.61%	0.0129%
Walmart Inc	WMT	290,496.95	1.18%	2.08%	5.01%	7.14%	0.0843%
Westrock Co	WRK	9,972.31	0.04%	4.64%	4.73%	9.47%	0.0038%
Western Union Co/The	WU	7,853.36	0.03%	4.37%	3.64%	8.09%	0.0026%
Weyerhaeuser Co	WY	19,062.83	0.08%	5.30%	8.70%	14.23%	0.0110%
Wynn Resorts Ltd	WYNN	13,539.03	0.06%	2.43%	31.10%	33.91%	0.0187%
Cimarex Energy Co	XEC	7,266.07	0.03%	0.76%	63.18%	64.19%	0.0190%
Xcel Energy Inc	XEL	27,980.03	0.11%	3.00%	5.98%	9.07%	0.0103%
Xilinx Inc	XLNX	30,204.98	0.12%	1.21%	9.33%	10.59%	0.0130%
Exxon Mobil Corp	XOM	329,009.16	1.34%	4.35%	11.51%	16.11%	0.2155%
DENTSPLY SIRONA Inc	XRAY	9,698.63	0.04%	0.80%	6.90%	7.72%	0.0030%
Xerox Corp	XRX	6,994.32	0.03%	3.37%	-0.10%	3.26%	0.0009%
Xylem Inc/NY	XYL	13,286.41	0.05%	1.30%	13.90%	15.29%	0.0083%
Yum! Brands Inc	YUM	28,800.72	0.12%	1.75%	12.97%	14.83%	0.0174%
Zimmer Biomet Holdings Inc	ZBH	25,221.67	0.10%	0.81%	4.74%	5.58%	0.0057%
Zions Bancorp NA	ZION	9,398.33	0.04%	2.63%	6.78%	9.49%	0.0036%
Zoetis Inc	ZTS	45,660.48	0.19%	0.62%	16.50%	17.17%	0.0319%
Total Market Capitalization:		24,595,841					13.75%

Notes:

[1] Equals sum of Col. [9]

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

[4] Source: Bloomberg Professional

[5] Equals weight in S&P 500 based on market capitalization

[6] Source: Bloomberg Professional

[7] Source: Bloomberg Professional

[8] Equals ([6] x (1 + (0.5 x [7]))) + [7]

[9] Equals Col. [5] x Col. [8]

Ex-Ante Market Risk Premium
Market DCF Method Based - Value Line

[1]	[2]	[3]
S&P 500	Current 30-Year	
Est. Required	Treasury (30-day	Implied Market
Market Return	average)	Risk Premium
17.14%	3.03%	14.10%

		[4]	[5]	[6]	[7]	[8]	[9]
Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Agilent Technologies Inc	A	23,954.94	0.11%	0.88%	9.50%	10.42%	0.0115%
American Airlines Group Inc	AAL	16,658.42	0.08%	1.11%	-0.50%	0.61%	0.0005%
Advance Auto Parts Inc	AAP	11,891.20	0.05%	0.15%	13.00%	13.16%	0.0072%
Apple Inc	AAPL	808,512.60	3.72%	1.88%	17.50%	19.54%	0.7273%
AbbVie Inc	ABBV	119,084.30	0.55%	5.41%	14.50%	20.30%	0.1113%
AmerisourceBergen Corp	ABC	18,105.95	0.08%	1.87%	8.00%	9.94%	0.0083%
ABIOMED Inc	ABMD	15,392.26	0.07%	0.00%	24.50%	24.50%	0.0174%
Abbott Laboratories	ABT	127,755.70	0.59%	1.76%	10.00%	11.85%	0.0697%
Accenture PLC	ACN	99,008.87	0.46%	1.97%	9.50%	11.56%	0.0527%
Adobe Inc	ADBE	123,739.60	0.57%	0.00%	22.00%	22.00%	0.1253%
Analog Devices Inc	ADI	37,249.20	0.17%	1.91%	10.50%	12.51%	0.0214%
Archer-Daniels-Midland Co	ADM	23,184.00	0.11%	3.38%	9.50%	13.04%	0.0139%
Automatic Data Processing Inc	ADP	63,545.61	0.29%	2.31%	15.00%	17.48%	0.0511%
Alliance Data Systems Corp	ADS	8,855.57	0.04%	1.41%	14.50%	16.01%	0.0065%
Autodesk Inc	ADSK	32,974.00	N/A	0.00%	N/A	N/A	N/A
Ameren Corp	AEE	17,025.62	0.08%	2.77%	7.50%	10.37%	0.0081%
American Electric Power Co Inc	AEP	39,176.55	0.18%	3.42%	4.50%	8.00%	0.0144%
AES Corp/VA	AES	11,331.90	N/A	3.21%	N/A	N/A	N/A
Aflac Inc	AFL	36,972.82	0.17%	2.31%	8.50%	10.91%	0.0186%
Allergan PLC	AGN	44,658.77	0.21%	2.24%	4.50%	6.79%	0.0140%
American International Group Inc	AIG	37,889.48	0.17%	2.99%	52.00%	55.77%	0.0973%
Apartment Investment & Management Co	AIV	8,119.78	0.04%	3.09%	5.50%	8.67%	0.0032%
Assurant Inc	AIZ	6,069.81	0.03%	2.47%	7.50%	10.06%	0.0028%
Arthur J Gallagher & Co	AJG	14,326.76	0.07%	2.21%	17.00%	19.40%	0.0128%
Akamai Technologies Inc	AKAM	11,313.17	0.05%	0.00%	17.50%	17.50%	0.0091%
Albemarle Corp	ALB	8,562.92	0.04%	1.66%	8.50%	10.23%	0.0040%
Align Technology Inc	ALGN	19,481.41	0.09%	0.00%	28.50%	28.50%	0.0256%
Alaska Air Group Inc	ALK	8,046.84	0.04%	2.15%	1.50%	3.67%	0.0014%
Allstate Corp/The	ALL	31,853.85	0.15%	1.99%	12.00%	14.11%	0.0207%
Allegion PLC	ALLE	8,625.02	0.04%	1.19%	10.50%	11.75%	0.0047%
Alexion Pharmaceuticals Inc	ALXN	26,502.05	0.12%	0.00%	24.50%	24.50%	0.0299%
Applied Materials Inc	AMAT	38,602.64	0.18%	2.00%	19.00%	21.19%	0.0376%
Advanced Micro Devices Inc	AMD	22,647.33	N/A	0.00%	N/A	N/A	N/A
AMETEK Inc	AME	17,434.23	0.08%	0.75%	10.50%	11.29%	0.0091%
Affiliated Managers Group Inc	AMG	6,353.10	0.03%	1.47%	6.50%	8.02%	0.0023%
Amgen Inc	AMGN	117,999.30	0.54%	3.15%	8.50%	11.78%	0.0640%
Ameriprise Financial Inc	AMP	17,508.26	0.08%	2.88%	16.00%	19.11%	0.0154%
American Tower Corp	AMT	75,817.71	0.35%	2.00%	11.50%	13.62%	0.0475%
Amazon.com Inc	AMZN	789,427.00	3.63%	0.00%	57.00%	57.00%	2.0711%
Arista Networks Inc	ANET	16,607.57	0.08%	0.00%	19.00%	19.00%	0.0145%
ANSYS Inc	ANSS	14,245.93	0.07%	0.00%	13.00%	13.00%	0.0085%
Anthem Inc	ANTM	79,764.00	0.37%	1.04%	18.00%	19.13%	0.0702%
Aon PLC	AON	40,251.46	0.19%	0.96%	9.50%	10.51%	0.0195%
AO Smith Corp	AOS	8,380.28	0.04%	1.79%	12.50%	14.40%	0.0056%
Apache Corp	APA	11,649.27	N/A	3.28%	N/A	N/A	N/A
Anadarko Petroleum Corp	APC	21,040.14	N/A	2.82%	N/A	N/A	N/A
Air Products & Chemicals Inc	APD	36,507.07	0.17%	2.79%	9.50%	12.42%	0.0209%
Amphenol Corp	APH	27,074.82	0.12%	1.02%	10.00%	11.07%	0.0138%
Aptiv PLC	APT	20,129.47	0.09%	1.16%	10.00%	11.22%	0.0104%
Alexandria Real Estate Equities Inc	ARE	13,243.33	N/A	2.92%	N/A	N/A	N/A
Arconic Inc	ARNC	8,543.72	N/A	1.36%	N/A	N/A	N/A
Atmos Energy Corp	ATO	10,796.82	0.05%	2.20%	7.50%	9.78%	0.0049%
Activision Blizzard Inc	ATVI	33,541.00	0.15%	0.86%	14.50%	15.42%	0.0238%
AvalonBay Communities Inc	AVB	26,966.99	0.12%	3.12%	5.50%	8.71%	0.0108%
Broadcom Inc	AVGO	111,134.20	0.51%	3.94%	47.50%	52.38%	0.2679%
Avery Dennison Corp	AVY	8,964.95	0.04%	2.14%	11.50%	13.76%	0.0057%
American Water Works Co Inc	AWK	17,494.33	0.08%	2.00%	10.00%	12.10%	0.0097%
American Express Co	AXP	89,149.06	0.41%	1.58%	9.00%	10.65%	0.0437%
AutoZone Inc	AZO	22,159.06	0.10%	0.00%	12.50%	12.50%	0.0127%
Boeing Co/The	BA	230,541.30	1.06%	2.03%	18.00%	20.21%	0.2145%
Bank of America Corp	BAC	278,397.10	1.28%	2.13%	13.00%	15.27%	0.1956%
Baxter International Inc	BAX	37,921.61	0.17%	1.07%	12.50%	13.64%	0.0238%
BB&T Corp	BBT	38,885.48	0.18%	3.21%	10.00%	13.37%	0.0239%
Best Buy Co Inc	BBY	16,009.92	0.07%	3.74%	12.00%	15.96%	0.0118%
Becton Dickinson and Co	BDX	64,792.19	0.30%	1.29%	10.00%	11.35%	0.0339%
Franklin Resources Inc	BEN	15,523.48	0.07%	3.53%	9.00%	12.69%	0.0091%
Brown-Forman Corp	BF/B	23,025.45	0.11%	1.37%	15.50%	16.98%	0.0180%
Brighthouse Financial Inc	BHF	N/A	N/A	0.00%	N/A	N/A	N/A
Baker Hughes a GE Co	BHGE	10,048.68	N/A	2.95%	N/A	N/A	N/A
Biogen Inc	BIIB	62,203.84	0.29%	0.00%	6.50%	6.50%	0.0186%
Bank of New York Mellon Corp/The	BK	51,525.17	0.24%	2.15%	9.00%	11.25%	0.0267%
Booking Holdings Inc	BKNG	87,519.80	0.40%	0.00%	14.00%	14.00%	0.0564%
BlackRock Inc	BLK	65,919.36	0.30%	3.18%	9.00%	12.32%	0.0374%
Ball Corp	BLL	18,144.72	0.08%	0.75%	22.00%	22.83%	0.0191%
Bristol-Myers Squibb Co	BMJ	81,691.56	0.38%	3.28%	13.50%	17.00%	0.0639%
Broadridge Financial Solutions Inc	BR	11,316.75	0.05%	2.00%	12.00%	14.12%	0.0074%
Berkshire Hathaway Inc	BRK/B	-	N/A	0.00%	N/A	N/A	N/A
Boston Scientific Corp	BSX	53,756.94	0.25%	0.00%	17.00%	17.00%	0.0421%
BorgWarner Inc	BWA	8,168.47	0.04%	1.73%	8.50%	10.30%	0.0039%
Boston Properties Inc	BXP	20,465.04	0.09%	2.94%	3.50%	6.49%	0.0061%
Citigroup Inc	C	153,390.60	0.71%	3.15%	8.50%	11.78%	0.0832%
Conagra Brands Inc	CAG	10,790.97	0.05%	3.83%	4.50%	8.42%	0.0042%
Cardinal Health Inc	CAH	16,166.50	0.07%	3.59%	10.00%	13.77%	0.0102%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Caterpillar Inc	CAT	75,993.98	0.35%	2.67%	17.00%	19.90%	0.0696%
Chubb Ltd	CB	60,229.01	0.28%	2.24%	9.50%	11.85%	0.0328%
Cboe Global Markets Inc	CBOE	10,604.47	0.05%	1.31%	17.00%	18.42%	0.0090%
CBRE Group Inc	CBRE	15,735.02	0.07%	0.00%	11.50%	11.50%	0.0083%
CBS Corp	CBS	18,431.25	0.08%	1.47%	10.50%	12.05%	0.0102%
Crown Castle International Corp	CCI	49,086.20	0.23%	3.89%	12.00%	16.12%	0.0364%
Carnival Corp	CCL	39,872.00	0.18%	3.51%	13.50%	17.25%	0.0317%
Cadence Design Systems Inc	CDNS	14,270.74	0.07%	0.00%	12.50%	12.50%	0.0082%
Celanese Corp	CE	13,010.62	0.06%	2.50%	10.00%	12.63%	0.0076%
Celgene Corp	CELG	61,132.79	0.28%	0.00%	14.50%	14.50%	0.0408%
Cerner Corp	CERN	18,316.31	0.08%	0.00%	9.00%	9.00%	0.0076%
CF Industries Holdings Inc	CF	9,577.39	0.04%	3.15%	48.50%	52.41%	0.0231%
Citizens Financial Group Inc	CFG	16,869.23	0.08%	3.60%	12.50%	16.33%	0.0127%
Church & Dwight Co Inc	CHD	15,395.93	0.07%	1.45%	10.00%	11.52%	0.0082%
CH Robinson Worldwide Inc	CHRW	12,469.68	0.06%	2.21%	10.00%	12.32%	0.0071%
Charter Communications Inc	CHTR	82,484.66	0.38%	0.00%	19.50%	19.50%	0.0740%
Cigna Corp	CI	45,287.58	0.21%	0.02%	13.00%	13.02%	0.0271%
Cincinnati Financial Corp	CINF	13,715.61	0.06%	2.66%	7.00%	9.75%	0.0062%
Colgate-Palmolive Co	CL	56,419.17	0.26%	2.58%	10.50%	13.22%	0.0343%
Clorox Co/The	CLX	19,622.11	0.09%	2.51%	7.50%	10.10%	0.0091%
Comerica Inc	CMA	13,847.78	0.06%	3.21%	18.00%	21.50%	0.0137%
Comcast Corp	CMCSA	171,425.30	0.79%	2.23%	13.00%	15.37%	0.1213%
CME Group Inc	CME	60,233.92	0.28%	1.69%	4.50%	6.23%	0.0173%
Chipotle Mexican Grill Inc	CMG	16,280.00	0.07%	0.00%	18.50%	18.50%	0.0139%
Cummins Inc	CMI	24,014.01	0.11%	3.05%	8.00%	11.17%	0.0123%
CMS Energy Corp	CMS	14,901.58	0.07%	2.91%	7.00%	10.01%	0.0069%
Centene Corp	CNC	26,248.35	0.12%	0.00%	17.00%	17.00%	0.0205%
CenterPoint Energy Inc	CNP	13,296.21	0.06%	3.73%	3.50%	7.30%	0.0045%
Capital One Financial Corp	COF	37,433.11	0.17%	2.03%	10.00%	12.13%	0.0209%
Cabot Oil & Gas Corp	COG	10,294.69	N/A	1.18%	N/A	N/A	N/A
Cooper Cos Inc/The	COO	13,395.46	0.06%	0.02%	14.50%	14.52%	0.0090%
ConocoPhillips	COP	77,685.80	N/A	1.81%	N/A	N/A	N/A
Costco Wholesale Corp	COST	92,096.13	0.42%	1.16%	8.50%	9.71%	0.0412%
Coty Inc	COTY	5,300.65	0.02%	7.08%	11.00%	18.47%	0.0045%
Campbell Soup Co	CPB	11,046.60	N/A	4.09%	N/A	N/A	N/A
Capri Holdings Ltd	CPRI	7,078.07	0.03%	0.00%	7.50%	7.50%	0.0024%
Copart Inc	CPRT	12,002.27	0.06%	0.00%	13.00%	13.00%	0.0072%
salesforce.com Inc	CRM	118,521.40	0.55%	0.00%	65.00%	65.00%	0.3546%
Cisco Systems Inc	CSCO	210,943.90	0.97%	3.02%	8.00%	11.14%	0.1082%
CSX Corp	CSX	57,597.89	0.27%	1.41%	18.50%	20.04%	0.0531%
Cintas Corp	CTAS	20,157.53	0.09%	1.07%	15.00%	16.15%	0.0150%
CenturyLink Inc	CTL	15,257.69	0.07%	15.30%	2.50%	17.99%	0.0126%
Cognizant Technology Solutions Corp	CTSH	42,334.20	0.19%	1.10%	10.00%	11.16%	0.0217%
Citrix Systems Inc	CTXS	14,155.35	0.07%	1.33%	7.50%	8.88%	0.0058%
CVS Health Corp	CVS	66,999.25	0.31%	3.04%	8.50%	11.67%	0.0360%
Chevron Corp	CVX	225,910.80	1.04%	4.03%	31.00%	35.65%	0.3707%
Concho Resources Inc	CXO	22,577.06	0.10%	0.00%	34.50%	34.50%	0.0359%
Dominion Energy Inc	D	47,598.85	0.22%	5.05%	6.50%	11.71%	0.0257%
Delta Air Lines Inc	DAL	34,562.05	0.16%	2.78%	10.50%	13.43%	0.0214%
Deere & Co	DE	51,526.02	0.24%	1.88%	14.00%	16.01%	0.0380%
Discover Financial Services	DFS	23,289.45	0.11%	2.32%	8.00%	10.41%	0.0112%
Dollar General Corp	DG	30,854.69	0.14%	0.99%	13.00%	14.05%	0.0200%
Quest Diagnostics Inc	DGX	12,204.64	0.06%	2.36%	9.50%	11.97%	0.0067%
DR Horton Inc	DHI	14,351.15	0.07%	1.56%	8.00%	9.62%	0.0064%
Danaher Corp	DHR	76,099.87	0.35%	0.59%	10.50%	11.12%	0.0390%
Walt Disney Co/The	DIS	166,425.00	0.77%	1.59%	7.00%	8.65%	0.0662%
Discovery Inc	DISCA	14,993.04	0.07%	0.00%	17.00%	17.00%	0.0117%
DISH Network Corp	DISH	14,530.57	0.07%	0.00%	1.00%	1.00%	0.0007%
Digital Realty Trust Inc	DLR	22,611.97	0.10%	3.91%	6.50%	10.54%	0.0110%
Dollar Tree Inc	DLTR	23,390.07	0.11%	0.00%	17.50%	17.50%	0.0188%
Dover Corp	DOV	12,718.39	0.06%	2.21%	13.00%	15.35%	0.0090%
Duke Realty Corp	DRE	10,705.08	0.05%	2.93%	7.00%	10.03%	0.0049%
Darden Restaurants Inc	DRI	13,535.35	0.06%	2.83%	12.50%	15.51%	0.0097%
DTE Energy Co	DTE	21,521.73	0.10%	3.25%	7.50%	10.87%	0.0108%
Duke Energy Corp	DUK	63,799.24	0.29%	4.27%	5.50%	9.89%	0.0290%
DaVita Inc	DVA	9,466.07	0.04%	0.00%	10.00%	10.00%	0.0044%
Devon Energy Corp	DEV	11,969.43	0.06%	1.27%	23.50%	24.92%	0.0137%
DowDuPont Inc	DWDP	119,703.10	N/A	3.22%	N/A	N/A	N/A
DXC Technology Co	DXC	18,245.73	0.08%	1.18%	14.00%	15.26%	0.0128%
Electronic Arts Inc	EA	25,314.10	0.12%	0.00%	11.50%	11.50%	0.0134%
eBay Inc	EBAY	33,945.75	0.16%	1.59%	14.50%	16.21%	0.0253%
Ecolab Inc	ECL	45,818.14	0.21%	1.16%	9.50%	10.72%	0.0226%
Consolidated Edison Inc	ED	24,324.94	0.11%	3.83%	3.00%	6.89%	0.0077%
Equifax Inc	EFX	12,855.96	0.06%	1.46%	7.50%	9.01%	0.0053%
Edison International	EIX	18,796.04	0.09%	4.26%	4.50%	8.86%	0.0077%
Estee Lauder Cos Inc/The	EL	55,114.89	0.25%	1.13%	12.50%	13.70%	0.0348%
Eastman Chemical Co	EMN	11,035.49	0.05%	3.15%	9.50%	12.80%	0.0065%
Emerson Electric Co	EMR	40,852.17	0.19%	2.97%	14.00%	17.18%	0.0323%
EOG Resources Inc	EOG	53,918.49	N/A	0.99%	N/A	N/A	N/A
Equinix Inc	EQIX	31,180.47	0.14%	2.67%	25.50%	28.51%	0.0409%
Equity Residential	EQR	27,064.04	0.12%	2.94%	-15.00%	-12.28%	-0.0153%
Eversource Energy	ES	22,188.36	0.10%	3.06%	5.50%	8.64%	0.0088%
Essex Property Trust Inc	ESS	18,327.35	0.08%	2.75%	0.50%	3.26%	0.0027%
E*TRADE Financial Corp	ETFC	11,975.52	0.06%	1.20%	26.00%	27.36%	0.0151%
Eaton Corp PLC	ETN	33,094.43	0.15%	3.46%	10.00%	13.63%	0.0208%
Entergy Corp	ETR	16,350.70	0.08%	4.06%	1.00%	5.08%	0.0038%
Evergy Inc	EVERG	-	N/A	3.37%	N/A	N/A	N/A
Edwards Lifesciences Corp	EW	35,599.27	0.16%	0.00%	15.00%	15.00%	0.0246%
Exelon Corp	EXC	46,541.71	0.21%	3.01%	7.50%	10.62%	0.0228%
Expeditors International of Washington I	EXPD	12,321.07	0.06%	1.26%	9.50%	10.82%	0.0061%
Expedia Group Inc	EXPE	19,080.76	0.09%	1.00%	20.00%	21.10%	0.0185%
Extra Space Storage Inc	EXR	12,550.30	0.06%	3.57%	5.00%	8.66%	0.0050%
Ford Motor Co	F	33,056.37	0.15%	7.22%	0.50%	7.74%	0.0118%
Diamondback Energy Inc	FANG	9,666.11	N/A	0.77%	N/A	N/A	N/A
Fastenal Co	FAST	17,438.71	0.08%	2.63%	11.50%	14.28%	0.0115%
Facebook Inc	FB	478,009.80	2.20%	0.00%	26.00%	26.00%	0.5720%
Fortune Brands Home & Security Inc	FBHS	6,327.87	0.03%	1.97%	13.50%	15.60%	0.0045%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Freeport-McMoRan Inc	FCX	17,185.14	N/A	2.02%	N/A	N/A	N/A
FedEx Corp	FDX	47,345.55	0.22%	1.43%	9.50%	11.00%	0.0240%
FirstEnergy Corp	FE	20,104.90	0.09%	3.92%	6.50%	10.55%	0.0098%
F5 Networks Inc	FFIV	9,591.86	0.04%	0.00%	10.50%	10.50%	0.0046%
Fidelity National Information Services I	FIS	35,643.76	0.16%	1.29%	15.50%	16.89%	0.0277%
Fiserv Inc	FISV	33,688.01	0.16%	0.00%	13.50%	13.50%	0.0209%
Fifth Third Bancorp	FITB	17,557.40	0.08%	3.29%	7.00%	10.41%	0.0084%
Foot Locker Inc	FL	6,414.53	0.03%	2.44%	8.00%	10.54%	0.0031%
FLIR Systems Inc	FLIR	6,861.27	0.03%	1.37%	13.50%	14.96%	0.0047%
Fluor Corp	FLR	4,892.44	0.02%	2.42%	8.50%	11.02%	0.0025%
Flowserve Corp	FLS	5,713.00	0.03%	1.74%	7.50%	9.31%	0.0024%
FleetCor Technologies Inc	FLT	19,331.47	0.09%	0.00%	14.50%	14.50%	0.0129%
FMC Corp	FMC	11,342.24	0.05%	1.90%	22.50%	24.61%	0.0128%
Twenty-First Century Fox Inc	FOXA	91,917.98	0.42%	0.73%	12.50%	13.28%	0.0562%
First Republic Bank/CA	FRC	16,584.84	0.08%	0.72%	11.50%	12.26%	0.0094%
Federal Realty Investment Trust	FRT	9,910.41	0.05%	3.02%	3.50%	6.57%	0.0030%
TechnipFMC PLC	FTI	N/A	N/A	0.00%	N/A	N/A	N/A
Fortinet Inc	FTNT	13,515.01	0.06%	0.00%	39.50%	39.50%	0.0246%
Fortive Corp	FTV	26,032.12	N/A	0.38%	N/A	N/A	N/A
General Dynamics Corp	GD	51,408.50	0.24%	2.14%	9.00%	11.24%	0.0266%
General Electric Co	GE	87,503.03	N/A	0.40%	N/A	N/A	N/A
Gilead Sciences Inc	GILD	87,060.32	0.40%	3.75%	-6.50%	-2.87%	-0.0115%
General Mills Inc	GIS	26,171.26	0.12%	4.51%	3.00%	7.58%	0.0091%
Corning Inc	GLW	26,581.25	0.12%	2.41%	15.50%	18.10%	0.0221%
General Motors Co	GM	54,110.00	0.25%	4.04%	3.00%	7.10%	0.0177%
Alphabet Inc	GOOGL	N/A	N/A	0.00%	N/A	N/A	N/A
Genuine Parts Co	GPC	15,097.10	0.07%	2.80%	9.00%	11.93%	0.0083%
Global Payments Inc	GPN	17,875.02	0.08%	0.04%	20.00%	20.04%	0.0165%
Gap Inc/The	GPS	9,523.26	0.04%	3.89%	7.00%	11.03%	0.0048%
Garmin Ltd	GRMN	13,137.33	0.06%	3.05%	10.50%	13.71%	0.0083%
Goldman Sachs Group Inc/The	GS	71,964.72	0.33%	1.66%	9.50%	11.24%	0.0372%
Goodyear Tire & Rubber Co/The	GT	4,788.15	0.02%	3.21%	12.50%	15.91%	0.0035%
WW Grainger Inc	GWV	17,068.34	0.08%	1.80%	9.50%	11.39%	0.0089%
Halliburton Co	HAL	26,718.00	N/A	2.36%	N/A	N/A	N/A
Hasbro Inc	HAS	11,436.12	0.05%	2.79%	8.00%	10.90%	0.0057%
Huntington Bancshares Inc/OH	HBAN	14,818.94	0.07%	4.01%	13.00%	17.27%	0.0118%
Hanesbrands Inc	HBI	6,747.97	0.03%	3.21%	4.00%	7.27%	0.0023%
HCA Healthcare Inc	HCA	48,525.99	0.22%	1.14%	15.00%	16.23%	0.0362%
HCP Inc	HCP	14,726.21	0.07%	4.85%	35.50%	41.21%	0.0279%
Home Depot Inc/The	HD	208,183.20	0.96%	2.50%	12.50%	15.16%	0.1452%
Hess Corp	HES	15,523.66	N/A	1.91%	N/A	N/A	N/A
HollyFrontier Corp	HFC	9,553.27	0.04%	2.48%	25.00%	27.79%	0.0122%
Hartford Financial Services Group Inc/Th	HIG	17,288.18	0.08%	2.49%	13.00%	15.65%	0.0125%
Huntington Ingalls Industries Inc	HII	9,040.32	0.04%	1.64%	12.50%	14.24%	0.0059%
Hilton Worldwide Holdings Inc	HLT	22,177.12	0.10%	0.80%	9.00%	9.84%	0.0100%
Harley-Davidson Inc	HOG	5,796.86	0.03%	4.16%	9.00%	13.35%	0.0036%
Hologic Inc	HOLX	11,615.23	0.05%	0.00%	18.50%	18.50%	0.0099%
Honeywell International Inc	HON	109,673.70	0.50%	2.21%	9.00%	11.31%	0.0571%
Helmerich & Payne Inc	HP	6,099.33	0.03%	5.09%	56.50%	63.03%	0.0177%
Hewlett Packard Enterprise Co	HPE	22,554.55	0.10%	2.84%	7.50%	10.45%	0.0108%
HP Inc	HPQ	35,661.60	0.16%	2.80%	9.50%	12.43%	0.0204%
H&R Block Inc	HRB	4,928.54	0.02%	4.30%	8.50%	12.98%	0.0029%
Hormel Foods Corp	HRL	22,690.06	0.10%	1.98%	9.00%	11.07%	0.0116%
Harris Corp	HRS	18,541.16	0.09%	1.74%	13.50%	15.36%	0.0131%
Henry Schein Inc	HSIC	12,147.79	0.06%	0.00%	8.50%	8.50%	0.0048%
Host Hotels & Resorts Inc	HST	13,444.23	N/A	4.56%	N/A	N/A	N/A
Hershey Co/The	HSY	22,431.76	0.10%	2.70%	6.50%	9.29%	0.0096%
Humana Inc	HUM	41,700.43	0.19%	0.72%	14.00%	14.77%	0.0283%
International Business Machines Corp	IBM	121,042.30	N/A	4.90%	N/A	N/A	N/A
Intercontinental Exchange Inc	ICE	43,139.05	0.20%	1.27%	12.50%	13.85%	0.0275%
IDEXX Laboratories Inc	IDXX	17,898.58	0.08%	0.00%	15.00%	15.00%	0.0124%
International Flavors & Fragrances Inc	IFF	13,049.50	0.06%	2.09%	9.50%	11.69%	0.0070%
Illumina Inc	ILMN	40,648.44	0.19%	0.00%	15.50%	15.50%	0.0290%
Incyte Corp	INCY	16,984.15	N/A	0.00%	N/A	N/A	N/A
IHS Markit Ltd	INFO	20,746.11	0.10%	0.00%	20.00%	20.00%	0.0191%
Intel Corp	INTC	224,685.70	1.03%	2.56%	12.50%	15.22%	0.1574%
Intuit Inc	INTU	57,357.40	0.26%	0.85%	14.50%	15.41%	0.0407%
International Paper Co	IP	18,755.55	0.09%	4.32%	15.50%	20.15%	0.0174%
Interpublic Group of Cos Inc/The	IPG	8,561.18	0.04%	3.84%	11.50%	15.56%	0.0061%
IPG Photonics Corp	IPGP	7,435.23	0.03%	0.00%	10.50%	10.50%	0.0036%
IQVIA Holdings Inc	IQV	26,228.19	0.12%	0.00%	14.50%	14.50%	0.0175%
Ingersoll-Rand PLC	IR	24,865.30	0.11%	2.09%	13.50%	15.73%	0.0180%
Iron Mountain Inc	IRM	10,458.52	0.05%	6.68%	8.50%	15.46%	0.0074%
Intuitive Surgical Inc	ISRG	58,168.91	0.27%	0.00%	15.00%	15.00%	0.0402%
Gartner Inc	IT	12,647.76	0.06%	0.00%	15.00%	15.00%	0.0087%
Illinois Tool Works Inc	ITW	44,799.63	0.21%	2.96%	11.00%	14.12%	0.0291%
Invesco Ltd	IVZ	7,555.58	0.03%	6.53%	4.00%	10.66%	0.0037%
JB Hunt Transport Services Inc	JBHT	11,885.99	0.05%	0.96%	13.50%	14.52%	0.0079%
Johnson Controls International plc	JCI	30,931.84	0.14%	3.07%	6.00%	9.16%	0.0130%
Jacobs Engineering Group Inc	JEC	9,158.29	0.04%	1.04%	13.00%	14.11%	0.0059%
Jefferies Financial Group Inc	JEF	6,651.50	0.03%	2.49%	20.50%	23.25%	0.0071%
Jack Henry & Associates Inc	JKHY	10,185.41	0.05%	1.12%	11.50%	12.68%	0.0059%
Johnson & Johnson	JNJ	354,310.60	1.63%	2.84%	10.50%	13.49%	0.2200%
Juniper Networks Inc	JNPR	8,962.25	0.04%	2.93%	4.50%	7.50%	0.0031%
JPMorgan Chase & Co	JPM	340,455.60	1.57%	3.17%	9.50%	12.82%	0.2009%
Nordstrom Inc	JWN	7,838.65	0.04%	3.19%	7.00%	10.30%	0.0037%
Kellogg Co	K	19,376.48	0.09%	4.05%	5.50%	9.66%	0.0086%
KeyCorp	KEY	17,655.28	0.08%	3.98%	13.00%	17.24%	0.0140%
Keysight Technologies Inc	KEYS	14,290.99	0.07%	0.00%	16.00%	16.00%	0.0105%
Kraft Heinz Co/The	KHC	57,573.38	0.26%	5.29%	9.50%	15.04%	0.0399%
Kimco Realty Corp	KIM	7,499.88	0.03%	6.47%	-0.50%	5.95%	0.0021%
KLA-Tencor Corp	KLAC	15,965.87	0.07%	2.84%	10.50%	13.49%	0.0099%
Kimberly-Clark Corp	KMB	39,256.68	0.18%	3.63%	10.50%	14.32%	0.0259%
Kinder Morgan Inc/DE	KMI	39,610.72	0.18%	4.45%	57.00%	62.72%	0.1143%
CarMax Inc	KMX	10,327.71	0.05%	0.00%	11.50%	11.50%	0.0055%
Coca-Cola Co/The	KO	210,331.50	0.97%	3.36%	6.50%	9.97%	0.0965%
Kroger Co/The	KR	22,487.64	0.10%	2.20%	5.00%	7.26%	0.0075%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Kohl's Corp	KSS	10,979.10	0.05%	3.94%	11.00%	15.16%	0.0077%
Kansas City Southern	KSU	10,405.51	0.05%	1.40%	12.50%	13.99%	0.0067%
Loews Corp	L	15,066.87	0.07%	0.52%	16.50%	17.06%	0.0118%
L Brands Inc	LB	7,403.00	0.03%	4.46%	-4.50%	-0.14%	0.0000%
Leggett & Platt Inc	LEG	5,709.70	0.03%	3.47%	9.00%	12.63%	0.0033%
Lennar Corp	LEN	15,255.87	0.07%	0.35%	12.00%	12.37%	0.0087%
Laboratory Corp of America Holdings	LH	14,952.44	0.07%	0.00%	9.50%	9.50%	0.0065%
Linde PLC	LIN	N/A	N/A	0.00%	N/A	N/A	N/A
LKQ Corp	LKQ	8,352.67	0.04%	0.00%	12.00%	12.00%	0.0046%
L3 Technologies Inc	LLL	15,923.96	0.07%	1.58%	11.00%	12.67%	0.0093%
Eli Lilly & Co	LLY	124,470.30	0.57%	2.20%	12.00%	14.33%	0.0821%
Lockheed Martin Corp	LMT	85,364.77	0.39%	3.07%	13.50%	16.78%	0.0659%
Lincoln National Corp	LNC	12,719.09	0.06%	2.57%	10.50%	13.20%	0.0077%
Alliant Energy Corp	LNT	10,555.78	0.05%	3.17%	6.50%	9.77%	0.0047%
Lowe's Cos Inc	LOW	78,085.28	0.36%	2.17%	13.00%	15.31%	0.0550%
Lam Research Corp	LRCX	27,054.03	0.12%	2.50%	13.00%	15.66%	0.0195%
Southwest Airlines Co	LUV	32,321.41	0.15%	1.11%	9.50%	10.66%	0.0159%
Lamb Weston Holdings Inc	LW	10,343.80	N/A	1.13%	N/A	N/A	N/A
LyondellBasell Industries NV	LYB	32,751.39	0.15%	4.73%	6.50%	11.38%	0.0172%
Macy's Inc	M	7,889.60	0.04%	5.89%	5.00%	11.04%	0.0040%
Mastercard Inc	MA	221,459.00	1.02%	0.62%	16.00%	16.67%	0.1699%
Mid-America Apartment Communities Inc	MAA	11,760.92	0.05%	3.71%	-4.50%	-0.87%	-0.0005%
Macerich Co/The	MAC	6,038.77	0.03%	7.05%	8.00%	15.33%	0.0043%
Marriott International Inc/MD	MAR	39,407.34	0.18%	1.42%	12.50%	14.01%	0.0254%
Masco Corp	MAS	10,766.11	0.05%	1.35%	14.50%	15.95%	0.0079%
Mattel Inc	MAT	4,248.13	0.02%	0.00%	22.00%	22.00%	0.0043%
McDonald's Corp	MCD	135,123.30	0.62%	2.65%	10.00%	12.78%	0.0795%
Microchip Technology Inc	MCHP	20,869.33	0.10%	1.70%	15.00%	16.83%	0.0162%
McKesson Corp	MCK	25,075.20	0.12%	1.19%	9.00%	10.24%	0.0118%
Moody's Corp	MCO	30,803.06	0.14%	1.10%	13.00%	14.17%	0.0201%
Mondelez International Inc	MDLZ	67,754.45	0.31%	2.32%	9.50%	11.93%	0.0372%
Medtronic PLC	MDT	119,675.30	0.55%	2.39%	7.50%	9.98%	0.0550%
MettLife Inc	MET	42,938.74	0.20%	4.00%	7.00%	11.14%	0.0220%
MGM Resorts International	MGM	15,372.98	0.07%	1.66%	31.00%	32.92%	0.0233%
Mohawk Industries Inc	MHK	9,563.98	0.04%	0.00%	4.50%	4.50%	0.0020%
McCormick & Co Inc/MD	MKC	16,438.38	0.08%	1.83%	10.00%	11.92%	0.0090%
Martin Marietta Materials Inc	MLM	11,429.89	0.05%	1.06%	13.00%	14.13%	0.0074%
Marsh & McLennan Cos Inc	MMC	45,071.41	0.21%	1.86%	9.00%	10.94%	0.0227%
3M Co	MMM	116,364.20	0.54%	2.88%	9.00%	12.01%	0.0643%
Monster Beverage Corp	MNST	31,756.03	0.15%	0.00%	15.00%	15.00%	0.0219%
Altria Group Inc	MO	91,596.91	0.42%	6.57%	10.50%	17.41%	0.0734%
Mosaic Co/The	MOS	12,103.76	0.06%	0.64%	12.00%	12.68%	0.0071%
Marathon Petroleum Corp	MPC	28,728.70	0.13%	3.33%	14.50%	18.07%	0.0239%
Merck & Co Inc	MRK	204,244.30	0.94%	2.86%	5.50%	8.44%	0.0793%
Marathon Oil Corp	MRO	12,796.26	N/A	1.44%	N/A	N/A	N/A
Morgan Stanley	MS	71,585.86	0.33%	2.89%	11.00%	14.05%	0.0463%
MSCI Inc	MSCI	15,277.86	0.07%	1.46%	22.00%	23.62%	0.0166%
Microsoft Corp	MSFT	808,789.40	3.72%	1.75%	15.00%	16.88%	0.6284%
Motorola Solutions Inc	MSI	19,394.37	0.09%	1.92%	13.00%	15.04%	0.0134%
M&T Bank Corp	MTB	23,578.97	0.11%	2.40%	13.00%	15.56%	0.0169%
Mettler-Toledo International Inc	MTD	16,232.42	0.07%	0.00%	11.00%	11.00%	0.0082%
Micron Technology Inc	MU	44,105.60	0.20%	0.00%	7.50%	7.50%	0.0152%
Maxim Integrated Products Inc	MXIM	14,995.88	0.07%	3.36%	11.50%	15.05%	0.0104%
Mylan NV	MYL	15,648.85	0.07%	0.00%	14.00%	14.00%	0.0101%
Noble Energy Inc	NBL	10,104.57	N/A	2.09%	N/A	N/A	N/A
Norwegian Cruise Line Holdings Ltd	NCLH	11,380.34	0.05%	0.00%	16.50%	16.50%	0.0086%
Nasdaq Inc	NDAQ	14,234.05	0.07%	2.03%	9.50%	11.63%	0.0076%
NextEra Energy Inc	NEE	86,675.33	0.40%	2.76%	9.00%	11.88%	0.0474%
Newmont Mining Corp	NEM	17,966.62	0.08%	1.66%	5.00%	6.70%	0.0055%
Netflix Inc	NFLX	150,322.90	0.69%	0.00%	47.00%	47.00%	0.3252%
NISource Inc	NI	9,663.87	0.04%	3.01%	18.00%	21.28%	0.0095%
NIKE Inc	NKE	129,929.00	0.60%	1.07%	16.00%	17.16%	0.1026%
Nektar Therapeutics	NKTR	7,583.36	N/A	0.00%	N/A	N/A	N/A
Nielsen Holdings PLC	NLSN	9,069.82	0.04%	5.48%	3.00%	8.56%	0.0036%
Northrop Grumman Corp	NOC	48,388.19	0.22%	1.72%	13.00%	14.83%	0.0330%
National Oilwell Varco Inc	NOV	10,979.00	0.05%	0.70%	41.50%	42.35%	0.0214%
NRG Energy Inc	NRG	12,052.39	N/A	0.29%	N/A	N/A	N/A
Norfolk Southern Corp	NSC	46,426.99	0.21%	2.02%	13.50%	15.66%	0.0335%
NetApp Inc	NTAP	17,015.46	0.08%	2.39%	20.50%	23.13%	0.0181%
Northern Trust Corp	NTRS	19,887.91	0.09%	2.67%	11.00%	13.82%	0.0126%
Nucor Corp	NUE	18,628.78	0.09%	2.70%	20.50%	23.48%	0.0201%
NVIDIA Corp	NVDA	89,926.21	0.41%	0.43%	23.00%	23.48%	0.0972%
Newell Brands Inc	NWL	10,154.87	0.05%	4.44%	9.50%	14.15%	0.0066%
News Corp	NWSA	7,433.23	N/A	1.57%	N/A	N/A	N/A
Realty Income Corp	O	19,923.40	0.09%	3.87%	4.50%	8.46%	0.0078%
ONEOK Inc	OKE	26,795.93	0.12%	5.53%	20.50%	26.60%	0.0328%
Omnicom Group Inc	OMC	16,713.75	0.08%	3.22%	7.00%	10.33%	0.0079%
Oracle Corp	ORCL	182,399.00	0.84%	1.51%	9.50%	11.08%	0.0930%
O'Reilly Automotive Inc	ORLY	29,363.25	0.14%	0.00%	13.00%	13.00%	0.0176%
Occidental Petroleum Corp	OXY	48,948.90	N/A	4.84%	N/A	N/A	N/A
Paychex Inc	PAYX	26,487.21	0.12%	3.36%	11.00%	14.54%	0.0177%
People's United Financial Inc	PBCT	5,816.70	0.03%	4.18%	11.00%	15.41%	0.0041%
PACCAR Inc	PCAR	23,051.82	0.11%	5.01%	7.00%	12.19%	0.0129%
Public Service Enterprise Group Inc	PEG	28,067.76	0.13%	3.41%	4.50%	7.99%	0.0103%
PepsiCo Inc	PEP	159,683.10	0.73%	3.28%	7.50%	10.90%	0.0801%
Pfizer Inc	PFE	241,045.80	1.11%	3.45%	14.00%	17.69%	0.1963%
Principal Financial Group Inc	PFG	13,601.46	0.06%	4.50%	6.50%	11.15%	0.0070%
Procter & Gamble Co/The	PG	243,003.50	1.12%	2.97%	10.50%	13.63%	0.1524%
Progressive Corp/The	PGR	39,487.53	0.18%	1.70%	15.50%	17.33%	0.0315%
Parker-Hannifin Corp	PH	20,997.23	0.10%	1.87%	14.00%	16.00%	0.0155%
PulteGroup Inc	PHM	7,584.78	0.03%	1.64%	15.50%	17.27%	0.0060%
Packaging Corp of America	PKG	8,962.38	0.04%	3.33%	9.50%	12.99%	0.0054%
PerkinElmer Inc	PKI	10,176.68	0.05%	0.31%	11.50%	11.83%	0.0055%
Prologis Inc	PLD	37,481.86	0.17%	2.84%	9.00%	11.97%	0.0206%
Philip Morris International Inc	PM	119,278.30	0.55%	5.94%	7.50%	13.66%	0.0750%
PNC Financial Services Group Inc/The	PNC	56,752.08	0.26%	3.09%	9.50%	12.74%	0.0333%
Pentair PLC	PNR	7,107.23	0.03%	1.76%	5.50%	7.31%	0.0024%

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Pinnacle West Capital Corp	PNW	9,988.07	0.05%	3.41%	6.00%	9.51%	0.0044%
PPG Industries Inc	PPG	25,151.94	0.12%	1.83%	4.50%	6.37%	0.0074%
PPL Corp	PPL	22,346.75	0.10%	5.41%	3.00%	8.49%	0.0087%
Perrigo Co PLC	PRGO	6,322.79	0.03%	1.81%	0.50%	2.31%	0.0007%
Prudential Financial Inc	PRU	37,825.61	0.17%	3.94%	6.50%	10.57%	0.0184%
Public Storage	PSA	36,481.31	0.17%	4.15%	7.00%	11.30%	0.0190%
Phillips 66	PSX	42,303.61	0.19%	3.72%	8.00%	11.87%	0.0231%
PVH Corp	PVH	8,441.30	0.04%	0.14%	11.00%	11.15%	0.0043%
Quanta Services Inc	PWR	5,101.10	0.02%	0.47%	19.50%	20.02%	0.0047%
Pioneer Natural Resources Co	PXD	23,317.50	0.11%	0.37%	75.00%	75.51%	0.0810%
PayPal Holdings Inc	PYPL	107,021.30	0.49%	0.00%	18.50%	18.50%	0.0911%
QUALCOMM Inc	QCOM	61,165.50	0.28%	5.20%	10.50%	15.97%	0.0450%
Qorvo Inc	QRVO	8,319.31	N/A	0.00%	N/A	N/A	N/A
Royal Caribbean Cruises Ltd	RCL	24,174.57	0.11%	2.42%	11.00%	13.55%	0.0151%
Everest Re Group Ltd	RE	9,043.96	0.04%	2.56%	10.00%	12.69%	0.0053%
Regency Centers Corp	REG	11,226.29	0.05%	3.38%	14.00%	17.62%	0.0091%
Regeneron Pharmaceuticals Inc	REGN	43,206.29	0.20%	0.00%	16.50%	16.50%	0.0328%
Regions Financial Corp	RF	17,006.08	0.08%	3.74%	13.50%	17.49%	0.0137%
Robert Half International Inc	RHI	7,653.91	0.04%	1.90%	9.00%	10.99%	0.0039%
Red Hat Inc	RHT	31,661.25	0.15%	0.00%	17.50%	17.50%	0.0255%
Raymond James Financial Inc	RJF	11,756.22	0.05%	1.73%	12.00%	13.83%	0.0075%
Ralph Lauren Corp	RL	10,102.75	0.05%	1.99%	7.00%	9.06%	0.0042%
ResMed Inc	RMD	13,714.67	0.06%	1.55%	14.50%	16.16%	0.0102%
Rockwell Automation Inc	ROK	20,328.41	0.09%	2.32%	10.50%	12.94%	0.0121%
Rollins Inc	ROL	12,310.43	0.06%	1.12%	15.50%	16.71%	0.0095%
Roper Technologies Inc	ROP	30,783.13	0.14%	0.62%	14.50%	15.16%	0.0215%
Ross Stores Inc	ROST	34,356.26	0.16%	1.04%	11.50%	12.60%	0.0199%
Republic Services Inc	RSG	25,231.16	0.12%	1.97%	13.50%	15.60%	0.0181%
Raytheon Co	RTN	50,182.80	0.23%	1.97%	11.00%	13.08%	0.0302%
SBA Communications Corp	SBAC	21,385.31	0.10%	0.00%	45.50%	45.50%	0.0448%
Starbucks Corp	SBUX	85,961.76	0.40%	2.20%	15.00%	17.37%	0.0687%
Charles Schwab Corp/The	SCHW	61,071.48	0.28%	1.51%	16.00%	17.63%	0.0496%
Sealed Air Corp	SEE	6,947.56	0.03%	1.45%	19.00%	20.59%	0.0066%
Sherwin-Williams Co/The	SHW	39,145.96	0.18%	0.83%	13.00%	13.88%	0.0250%
SVB Financial Group	SIVB	12,573.92	0.06%	0.00%	21.50%	21.50%	0.0124%
JM Smucker Co/The	SJM	11,815.85	0.05%	3.33%	4.50%	7.90%	0.0043%
Schlumberger Ltd	SLB	60,183.49	0.28%	4.60%	26.00%	31.20%	0.0864%
SL Green Realty Corp	SLG	8,771.03	0.04%	3.69%	6.50%	10.31%	0.0042%
Snap-on Inc	SNA	8,522.87	0.04%	2.51%	8.00%	10.61%	0.0042%
Synopsys Inc	SNPS	13,769.02	0.06%	0.00%	10.50%	10.50%	0.0067%
Southern Co/The	SO	49,110.84	0.23%	5.05%	3.50%	8.64%	0.0195%
Simon Property Group Inc	SPG	57,828.90	0.27%	4.57%	3.00%	7.64%	0.0203%
S&P Global Inc	SPGI	48,925.50	0.23%	1.17%	13.50%	14.75%	0.0332%
Sempra Energy	SRE	32,337.48	0.15%	3.29%	9.50%	12.95%	0.0193%
SunTrust Banks Inc	STI	29,077.73	0.13%	3.32%	13.50%	17.04%	0.0228%
State Street Corp	STT	26,473.22	0.12%	2.70%	9.00%	11.82%	0.0144%
Seagate Technology PLC	STX	12,587.96	0.06%	5.67%	9.00%	14.93%	0.0086%
Constellation Brands Inc	STZ	33,045.13	0.15%	1.84%	11.00%	12.94%	0.0197%
Stanley Black & Decker Inc	SWK	19,343.23	0.09%	2.11%	10.00%	12.22%	0.0109%
Skyworks Solutions Inc	SWKS	14,199.60	0.07%	1.86%	11.00%	12.96%	0.0085%
Synchrony Financial	SYF	21,640.36	0.10%	2.79%	11.00%	13.94%	0.0139%
Stryker Corp	SYK	67,634.30	0.31%	1.15%	15.00%	16.24%	0.0505%
Symantec Corp	SYMC	14,415.84	0.07%	1.33%	9.50%	10.89%	0.0072%
Sysco Corp	SY	33,435.03	0.15%	2.40%	13.00%	15.56%	0.0239%
AT&T Inc	T	214,109.80	0.99%	6.93%	7.00%	14.17%	0.1397%
Molson Coors Brewing Co	TAP	14,150.01	0.07%	2.50%	11.00%	13.64%	0.0089%
TransDigm Group Inc	TDG	22,246.27	0.10%	0.00%	8.00%	8.00%	0.0082%
TE Connectivity Ltd	TEL	28,474.77	0.13%	2.17%	9.50%	11.77%	0.0154%
Teleflex Inc	TFX	12,456.07	0.06%	0.50%	12.00%	12.53%	0.0072%
Target Corp	TGT	37,497.34	0.17%	3.56%	7.00%	10.68%	0.0184%
Tiffany & Co	TIF	10,796.68	0.05%	2.65%	12.00%	14.81%	0.0074%
TJX Cos Inc/The	TJX	59,832.19	0.28%	1.65%	13.00%	14.76%	0.0406%
Torchmark Corp	TMK	9,143.94	0.04%	0.79%	10.00%	10.83%	0.0046%
Thermo Fisher Scientific Inc	TMO	97,789.73	0.45%	0.28%	10.50%	10.79%	0.0486%
Tapestry Inc	TPR	9,702.51	0.04%	4.03%	13.00%	17.29%	0.0077%
TripAdvisor Inc	TRIP	8,073.75	0.04%	0.00%	10.50%	10.50%	0.0039%
T Rowe Price Group Inc	TROW	22,741.23	0.10%	3.12%	11.50%	14.80%	0.0155%
Travelers Cos Inc/The	TRV	33,566.05	0.15%	2.43%	5.50%	8.00%	0.0124%
Tractor Supply Co	TSCO	11,082.39	0.05%	1.50%	10.50%	12.08%	0.0062%
Tyson Foods Inc	TSN	22,003.92	0.10%	2.50%	7.00%	9.59%	0.0097%
Total System Services Inc	TSS	16,572.94	0.08%	0.57%	11.50%	12.10%	0.0092%
Take-Two Interactive Software Inc	TTWO	10,901.13	0.05%	0.00%	29.50%	29.50%	0.0148%
Twitter Inc	TWTR	23,420.41	N/A	0.00%	N/A	N/A	N/A
Texas Instruments Inc	TXN	100,210.70	0.46%	2.97%	12.50%	15.66%	0.0722%
Textron Inc	TXT	12,890.28	0.06%	0.15%	15.00%	15.16%	0.0090%
Under Armour Inc	UAA	9,132.38	0.04%	0.00%	11.50%	11.50%	0.0048%
United Continental Holdings Inc	UAL	23,938.69	0.11%	0.00%	6.00%	6.00%	0.0066%
UDR Inc	UDR	11,910.05	0.05%	2.90%	-2.50%	0.36%	0.0002%
Universal Health Services Inc	UHS	12,298.55	0.06%	0.30%	11.00%	11.32%	0.0064%
Ulta Beauty Inc	ULTA	17,460.13	0.08%	0.00%	20.00%	20.00%	0.0161%
UnitedHealth Group Inc	UNH	258,778.00	1.19%	1.34%	15.00%	16.44%	0.1958%
Unum Group	UNM	7,718.74	0.04%	2.95%	9.50%	12.59%	0.0045%
Union Pacific Corp	UNP	119,160.80	0.55%	1.98%	13.50%	15.61%	0.0856%
United Parcel Service Inc	UPS	92,720.46	0.43%	3.60%	8.50%	12.25%	0.0523%
United Rentals Inc	URI	10,272.03	0.05%	0.00%	17.00%	17.00%	0.0080%
US Bancorp	USB	82,694.55	0.38%	3.02%	7.50%	10.63%	0.0405%
United Technologies Corp	UTX	96,694.79	0.45%	2.44%	9.50%	12.06%	0.0537%
Visa Inc	V	285,246.00	1.31%	0.77%	14.50%	15.33%	0.2012%
Varian Medical Systems Inc	VAR	11,895.21	0.05%	0.00%	8.00%	8.00%	0.0044%
VF Corp	VFC	34,026.41	0.16%	2.37%	12.00%	14.51%	0.0227%
Viacom Inc	VIAB	11,843.08	0.05%	2.72%	4.00%	6.77%	0.0037%
Valero Energy Corp	VLO	35,632.05	0.16%	4.29%	10.00%	14.50%	0.0238%
Vulcan Materials Co	VMC	13,450.10	0.06%	1.10%	18.00%	19.20%	0.0119%
Vornado Realty Trust	VNO	13,291.48	0.06%	3.78%	-5.50%	-1.82%	-0.0011%
Verisk Analytics Inc	VRSK	19,818.52	0.09%	0.00%	9.00%	9.00%	0.0082%
VeriSign Inc	VRSN	20,966.39	0.10%	0.00%	12.00%	12.00%	0.0116%
Vertex Pharmaceuticals Inc	VRTX	46,055.99	N/A	0.00%	N/A	N/A	N/A

Company	Ticker	Market Capitalization	Weight in Index	Estimated Dividend Yield	Long-Term Growth Est.	DCF Result	Weighted DCF Result
Ventas Inc	VTR	22,891.80	0.11%	5.03%	3.50%	8.62%	0.0091%
Verizon Communications Inc	VZ	221,352.00	1.02%	4.50%	4.50%	9.10%	0.0927%
Waters Corp	WAT	17,417.90	0.08%	0.00%	11.00%	11.00%	0.0088%
Walgreens Boots Alliance Inc	WBA	67,173.28	0.31%	2.47%	11.00%	13.61%	0.0421%
WellCare Health Plans Inc	WCG	13,990.90	0.06%	0.00%	22.50%	22.50%	0.0145%
Western Digital Corp	WDC	13,345.26	0.06%	4.36%	1.50%	5.89%	0.0036%
WEC Energy Group Inc	WEC	23,345.77	0.11%	3.19%	7.00%	10.30%	0.0111%
Welltower Inc	WELL	28,641.80	0.13%	4.62%	8.50%	13.32%	0.0176%
Wells Fargo & Co	WFC	226,531.90	1.04%	3.81%	6.00%	9.92%	0.1035%
Whirlpool Corp	WHR	8,581.76	0.04%	3.43%	8.00%	11.57%	0.0046%
Willis Towers Watson PLC	WLTW	21,136.50	N/A	1.47%	N/A	N/A	N/A
Waste Management Inc	WM	41,384.14	0.19%	1.92%	10.50%	12.52%	0.0238%
Williams Cos Inc/The	WMB	32,297.26	0.15%	5.10%	22.50%	28.17%	0.0419%
Walmart Inc	WMT	281,025.80	1.29%	2.19%	7.00%	9.27%	0.1199%
Westrock Co	WRK	9,607.65	0.04%	4.80%	14.50%	19.65%	0.0087%
Western Union Co/The	WU	8,128.58	0.04%	4.15%	7.00%	11.30%	0.0042%
Weyerhaeuser Co	WY	19,411.75	0.09%	5.25%	17.50%	23.21%	0.0207%
Wynn Resorts Ltd	WYNN	13,795.79	0.06%	2.36%	20.00%	22.60%	0.0143%
Cimarex Energy Co	XEC	6,841.35	0.03%	1.01%	39.00%	40.21%	0.0127%
Xcel Energy Inc	XEL	27,271.57	0.13%	3.01%	5.50%	8.59%	0.0108%
Xilinx Inc	XLNX	28,539.18	0.13%	1.28%	11.00%	12.35%	0.0162%
Exxon Mobil Corp	XOM	316,195.10	1.46%	4.47%	18.00%	22.87%	0.3329%
DENTSPLY SIRONA Inc	XRAY	9,536.35	0.04%	0.82%	3.00%	3.83%	0.0017%
Xerox Corp	XRK	7,104.80	0.03%	3.45%	2.50%	5.99%	0.0020%
Xylem Inc/NY	XYL	12,645.49	0.06%	1.36%	15.50%	16.97%	0.0099%
Yum! Brands Inc	YUM	29,612.93	0.14%	1.78%	10.00%	11.87%	0.0162%
Zimmer Biomet Holdings Inc	ZBH	24,131.16	0.11%	0.81%	4.50%	5.33%	0.0059%
Zions Bancorp NA	ZION	9,473.93	0.04%	2.43%	15.00%	17.61%	0.0077%
Zoetis Inc	ZTS	41,465.29	0.19%	0.77%	13.50%	14.32%	0.0273%
Total Market Capitalization:		21,726,647.16					17.14%

Notes:

[1] Equals sum of Col. [9]

[2] Source: Bloomberg Professional

[3] Equals [1] - [2]

[4] Source: Value Line

[5] Equals weight in S&P 500 based on market capitalization

[6] Source: Value Line

[7] Source: Value Line

[8] Equals ([6] x (1 + (0.5 x [7]))) + [7]

[9] Equals Col. [5] x Col. [8]

Bloomberg and Value Line Beta Coefficients

Company	Ticker	[1]	[2]
		Bloomberg	Value Line
ALLETE, Inc.	ALE	0.458	0.650
Alliant Energy Corporation	LNT	0.540	0.600
Ameren Corporation	AEE	0.450	0.550
American Electric Power Company, Inc.	AEP	0.506	0.550
Avangrid, Inc.	AGR	0.477	0.400
Black Hills Corporation	BKH	0.544	0.750
CMS Energy Corporation	CMS	0.476	0.550
DTE Energy Company	DTE	0.506	0.550
El Paso Electric Company	EE	0.524	0.650
Evergy, Inc.	EVRG	0.426	0.516
Hawaiian Electric Industries, Inc.	HE	0.487	0.600
NextEra Energy, Inc.	NEE	0.561	0.600
NorthWestern Corporation	NWE	0.491	0.550
OGE Energy Corp.	OGE	0.562	0.850
Otter Tail Corporation	OTTR	0.526	0.750
Pinnacle West Capital Corporation	PNW	0.424	0.550
PNM Resources, Inc.	PNM	0.513	0.650
Portland General Electric Company	POR	0.484	0.600
Southern Company	SO	0.493	0.500
Wisconsin Energy Corporation	WEC	0.487	0.500
Xcel Energy Inc.	XEL	0.491	0.500
Mean		0.496	0.591

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line. Value Line does not report a Beta coefficient for Evergy, Inc. Therefore, the Beta coefficient for Evergy has been manually calculated according to Value Line's methodology.

Capital Asset Pricing Model Results
Bloomberg and Value Line Derived Market Risk Premium

	[1] Risk-Free Rate	[2] Average Beta Coefficient	[3] Bloomberg Market DCF Derived	[4] Value Line Market DCF Derived	[5] Bloomberg MRP	[6] Value Line MRP
PROXY GROUP AVERAGE BLOOMBERG BETA COEFFICIENT						
Current 30-Year Treasury (30-day average) [7]	3.03%	0.496	10.72%	14.10%	8.36%	10.04%
Near-Term Projected 30-Year Treasury [8]	3.33%	0.496	10.72%	14.10%	8.65%	10.33%
Mean					8.51%	10.18%
	Risk-Free Rate	Average Beta Coefficient	Bloomberg Market DCF Derived	Value Line Market DCF Derived	Bloomberg MRP	Value Line MRP
PROXY GROUP AVERAGE VALUE LINE AVERAGE BETA COEFFICIENT						
Current 30-Year Treasury (30-day average) [7]	3.03%	0.591	10.72%	14.10%	9.37%	11.37%
Near-Term Projected 30-Year Treasury [8]	3.33%	0.591	10.72%	14.10%	9.67%	11.67%
Mean					9.52%	11.52%

Notes:

[1] See Notes [7] and [8]

[2] Source: Rebuttal Exhibit No. RBH-4

[3] Source: Rebuttal Exhibit No. RBH-3

[4] Source: Rebuttal Exhibit No. RBH-3

[5] Equals Col. [1] + (Col. [2] x Col. [3])

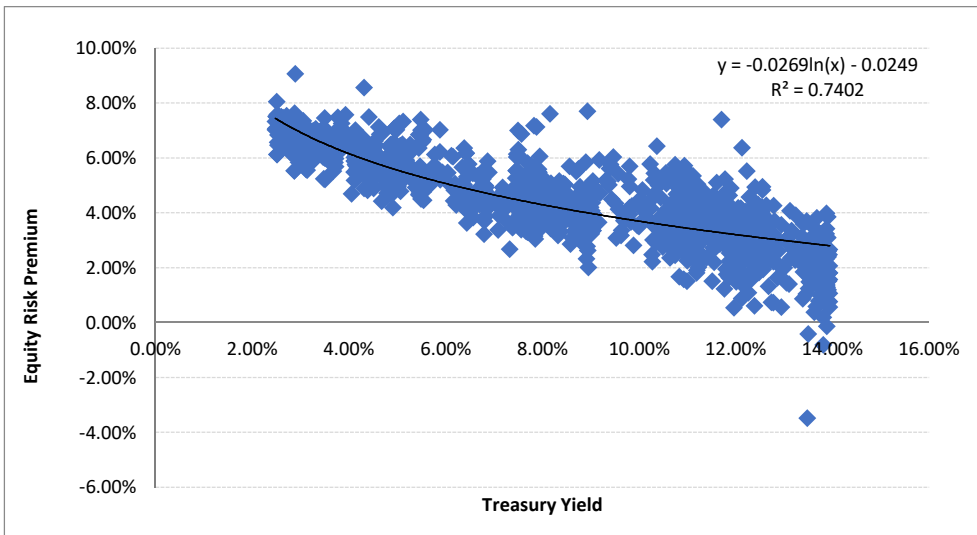
[6] Equals Col. [1] + (Col. [2] x Col. [4])

[7] Source: Bloomberg Professional

[8] Source: Blue Chip Financial Forecasts, Vol. 38, No. 2, February 1, 2019, at 2.

Bond Yield Plus Risk Premium

[1]	[2]	[3]	[4]	[5]
Constant	Slope	30-Year Treasury Yield	Risk Premium	Return on Equity
-2.49%	-2.69%			
Current 30-Year Treasury		3.03%	6.90%	9.93%
Near-Term Projected 30-Year Treasury		3.33%	6.65%	9.98%
Long-Term Projected 30-Year Treasury		4.05%	6.12%	10.17%



Notes:

[1] Constant of regression equation

[2] Slope of regression equation

[3] Source: Current = Bloomberg Professional,

Near Term Projected = Blue Chip Financial Forecasts, Vol. 38, No. 2, February 1, 2019, at 2.

Long Term Projected = Blue Chip Financial Forecasts, Vol. 37, No. 12, December 1, 2018, at 14.

[4] Equals [1] + $\ln([3]) \times [2]$

[5] Equals [3] + [4]

[6] Source: S&P Global Market Intelligence

[7] Source: S&P Global Market Intelligence

[8] Source: Bloomberg Professional, equals 200-trading day average (i.e. lag period)

[9] Equals [7] - [8]

[6] Date of Electric Rate Case	Bond Yield Plus Risk Premium		
	[7] Return on Equity	[8] 30-Year Treasury Yield	[9] Risk Premium
1/1/1980	14.50%	9.36%	5.14%
1/7/1980	14.39%	9.38%	5.01%
1/9/1980	15.00%	9.40%	5.60%
1/14/1980	15.17%	9.42%	5.75%
1/17/1980	13.93%	9.44%	4.49%
1/23/1980	15.50%	9.47%	6.03%
1/30/1980	13.86%	9.52%	4.34%
1/31/1980	12.61%	9.53%	3.08%
2/6/1980	13.71%	9.58%	4.13%
2/13/1980	12.80%	9.63%	3.17%
2/14/1980	13.00%	9.65%	3.35%
2/19/1980	13.50%	9.68%	3.82%
2/27/1980	13.75%	9.78%	3.97%
2/29/1980	13.75%	9.81%	3.94%
2/29/1980	14.00%	9.81%	4.19%
2/29/1980	14.77%	9.81%	4.96%
3/7/1980	12.70%	9.89%	2.81%
3/14/1980	13.50%	9.97%	3.53%
3/26/1980	14.16%	10.10%	4.06%
3/27/1980	14.24%	10.12%	4.12%
3/28/1980	14.50%	10.13%	4.37%
4/11/1980	12.75%	10.27%	2.48%
4/14/1980	13.85%	10.29%	3.56%
4/16/1980	15.50%	10.31%	5.19%
4/22/1980	13.25%	10.35%	2.90%
4/22/1980	13.90%	10.35%	3.55%
4/24/1980	16.80%	10.38%	6.43%
4/29/1980	15.50%	10.41%	5.09%
5/6/1980	13.70%	10.45%	3.25%
5/7/1980	15.00%	10.45%	4.55%
5/8/1980	13.75%	10.46%	3.29%
5/9/1980	14.35%	10.47%	3.88%
5/13/1980	13.60%	10.48%	3.12%
5/15/1980	13.25%	10.49%	2.76%
5/19/1980	13.75%	10.51%	3.24%
5/27/1980	13.62%	10.54%	3.08%
5/27/1980	14.60%	10.54%	4.06%
5/29/1980	16.00%	10.56%	5.44%
5/30/1980	13.80%	10.56%	3.24%
6/2/1980	15.63%	10.57%	5.06%
6/9/1980	15.90%	10.60%	5.30%
6/10/1980	13.78%	10.60%	3.18%
6/12/1980	14.25%	10.61%	3.64%
6/19/1980	13.40%	10.62%	2.78%
6/30/1980	13.00%	10.65%	2.35%
6/30/1980	13.40%	10.65%	2.75%
7/9/1980	14.75%	10.67%	4.08%
7/10/1980	15.00%	10.68%	4.32%
7/15/1980	15.80%	10.70%	5.10%
7/18/1980	13.80%	10.71%	3.09%
7/22/1980	14.10%	10.72%	3.38%
7/24/1980	15.00%	10.73%	4.27%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/25/1980	13.48%	10.73%	2.75%
7/31/1980	14.58%	10.75%	3.83%
8/8/1980	13.50%	10.78%	2.72%
8/8/1980	14.00%	10.78%	3.22%
8/8/1980	15.45%	10.78%	4.67%
8/11/1980	14.85%	10.78%	4.07%
8/14/1980	14.00%	10.79%	3.21%
8/14/1980	16.25%	10.79%	5.46%
8/25/1980	13.75%	10.82%	2.93%
8/27/1980	13.80%	10.83%	2.97%
8/29/1980	12.50%	10.84%	1.66%
9/15/1980	13.50%	10.88%	2.62%
9/15/1980	13.93%	10.88%	3.05%
9/15/1980	15.80%	10.88%	4.92%
9/24/1980	12.50%	10.93%	1.57%
9/24/1980	15.00%	10.93%	4.07%
9/26/1980	13.75%	10.94%	2.81%
9/30/1980	14.10%	10.96%	3.14%
9/30/1980	14.20%	10.96%	3.24%
10/1/1980	13.90%	10.97%	2.93%
10/3/1980	15.50%	10.98%	4.52%
10/7/1980	12.50%	10.99%	1.51%
10/9/1980	13.25%	11.00%	2.25%
10/9/1980	14.50%	11.00%	3.50%
10/9/1980	14.50%	11.00%	3.50%
10/16/1980	16.10%	11.02%	5.08%
10/17/1980	14.50%	11.03%	3.47%
10/31/1980	13.75%	11.11%	2.64%
10/31/1980	14.25%	11.11%	3.14%
11/4/1980	15.00%	11.12%	3.88%
11/5/1980	13.75%	11.12%	2.63%
11/5/1980	14.00%	11.12%	2.88%
11/8/1980	13.75%	11.14%	2.61%
11/10/1980	14.85%	11.15%	3.70%
11/17/1980	14.00%	11.18%	2.82%
11/18/1980	14.00%	11.19%	2.81%
11/19/1980	13.00%	11.19%	1.81%
11/24/1980	14.00%	11.21%	2.79%
11/26/1980	14.00%	11.21%	2.79%
12/8/1980	14.15%	11.22%	2.93%
12/8/1980	15.10%	11.22%	3.88%
12/9/1980	15.35%	11.22%	4.13%
12/12/1980	15.45%	11.23%	4.22%
12/17/1980	13.25%	11.23%	2.02%
12/18/1980	15.80%	11.23%	4.57%
12/19/1980	14.50%	11.23%	3.27%
12/19/1980	14.64%	11.23%	3.41%
12/22/1980	13.45%	11.23%	2.22%
12/22/1980	15.00%	11.23%	3.77%
12/30/1980	14.50%	11.22%	3.28%
12/30/1980	14.95%	11.22%	3.73%
12/31/1980	13.39%	11.22%	2.17%
1/2/1981	15.25%	11.22%	4.03%
1/7/1981	14.30%	11.21%	3.09%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/19/1981	15.25%	11.20%	4.05%
1/23/1981	13.10%	11.20%	1.90%
1/23/1981	14.40%	11.20%	3.20%
1/26/1981	15.25%	11.20%	4.05%
1/27/1981	15.00%	11.21%	3.79%
1/31/1981	13.47%	11.22%	2.25%
2/3/1981	15.25%	11.23%	4.02%
2/5/1981	15.75%	11.25%	4.50%
2/11/1981	15.60%	11.28%	4.32%
2/20/1981	15.25%	11.33%	3.92%
3/11/1981	15.40%	11.49%	3.91%
3/12/1981	14.51%	11.50%	3.01%
3/12/1981	16.00%	11.50%	4.50%
3/13/1981	13.02%	11.52%	1.50%
3/18/1981	16.19%	11.55%	4.64%
3/19/1981	13.75%	11.56%	2.19%
3/23/1981	14.30%	11.58%	2.72%
3/25/1981	15.30%	11.60%	3.70%
4/1/1981	14.53%	11.68%	2.85%
4/3/1981	19.10%	11.71%	7.39%
4/9/1981	15.00%	11.78%	3.22%
4/9/1981	15.30%	11.78%	3.52%
4/9/1981	16.50%	11.78%	4.72%
4/9/1981	17.00%	11.78%	5.22%
4/10/1981	13.75%	11.80%	1.95%
4/13/1981	13.57%	11.82%	1.75%
4/15/1981	15.30%	11.85%	3.45%
4/16/1981	13.50%	11.87%	1.63%
4/17/1981	14.10%	11.87%	2.23%
4/21/1981	14.00%	11.90%	2.10%
4/21/1981	16.80%	11.90%	4.90%
4/24/1981	16.00%	11.95%	4.05%
4/27/1981	12.50%	11.97%	0.53%
4/27/1981	13.61%	11.97%	1.64%
4/29/1981	13.65%	12.00%	1.65%
4/30/1981	13.50%	12.02%	1.48%
5/4/1981	16.22%	12.05%	4.17%
5/5/1981	14.40%	12.07%	2.33%
5/7/1981	16.25%	12.11%	4.14%
5/7/1981	16.27%	12.11%	4.16%
5/8/1981	13.00%	12.13%	0.87%
5/8/1981	16.00%	12.13%	3.87%
5/12/1981	13.50%	12.16%	1.34%
5/15/1981	15.75%	12.22%	3.53%
5/18/1981	14.88%	12.23%	2.65%
5/20/1981	16.00%	12.26%	3.74%
5/21/1981	14.00%	12.27%	1.73%
5/26/1981	14.90%	12.30%	2.60%
5/27/1981	15.00%	12.31%	2.69%
5/29/1981	15.50%	12.34%	3.16%
6/1/1981	16.50%	12.35%	4.15%
6/3/1981	14.67%	12.37%	2.30%
6/5/1981	13.00%	12.39%	0.61%
6/10/1981	16.75%	12.42%	4.33%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/17/1981	14.40%	12.46%	1.94%
6/18/1981	16.33%	12.47%	3.86%
6/25/1981	14.75%	12.51%	2.24%
6/26/1981	16.00%	12.52%	3.48%
6/30/1981	15.25%	12.54%	2.71%
7/1/1981	15.50%	12.56%	2.94%
7/1/1981	17.50%	12.56%	4.94%
7/10/1981	16.00%	12.62%	3.38%
7/14/1981	16.90%	12.64%	4.26%
7/15/1981	16.00%	12.65%	3.35%
7/17/1981	15.00%	12.67%	2.33%
7/20/1981	15.00%	12.68%	2.32%
7/21/1981	14.00%	12.69%	1.31%
7/28/1981	13.48%	12.74%	0.74%
7/31/1981	13.50%	12.78%	0.72%
7/31/1981	15.00%	12.78%	2.22%
7/31/1981	16.00%	12.78%	3.22%
8/5/1981	15.71%	12.83%	2.88%
8/10/1981	14.50%	12.87%	1.63%
8/11/1981	15.00%	12.88%	2.12%
8/20/1981	13.50%	12.95%	0.55%
8/20/1981	16.50%	12.95%	3.55%
8/24/1981	15.00%	12.97%	2.03%
8/28/1981	15.00%	13.01%	1.99%
9/3/1981	14.50%	13.05%	1.45%
9/10/1981	14.50%	13.11%	1.39%
9/11/1981	16.00%	13.12%	2.88%
9/16/1981	16.00%	13.15%	2.85%
9/17/1981	16.50%	13.16%	3.34%
9/23/1981	15.85%	13.20%	2.65%
9/28/1981	15.50%	13.23%	2.27%
10/9/1981	15.75%	13.33%	2.42%
10/15/1981	16.25%	13.37%	2.88%
10/16/1981	15.50%	13.38%	2.12%
10/16/1981	16.50%	13.38%	3.12%
10/19/1981	14.25%	13.39%	0.86%
10/20/1981	15.25%	13.41%	1.84%
10/20/1981	17.00%	13.41%	3.59%
10/23/1981	16.00%	13.45%	2.55%
10/27/1981	10.00%	13.48%	-3.48%
10/29/1981	14.75%	13.51%	1.24%
10/29/1981	16.50%	13.51%	2.99%
11/3/1981	15.17%	13.53%	1.64%
11/5/1981	16.60%	13.55%	3.05%
11/6/1981	15.17%	13.56%	1.61%
11/24/1981	15.50%	13.61%	1.89%
11/25/1981	15.25%	13.61%	1.64%
11/25/1981	15.35%	13.61%	1.74%
11/25/1981	16.10%	13.61%	2.49%
11/25/1981	16.10%	13.61%	2.49%
12/1/1981	15.70%	13.61%	2.09%
12/1/1981	16.00%	13.61%	2.39%
12/1/1981	16.49%	13.61%	2.88%
12/1/1981	16.50%	13.61%	2.89%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/4/1981	16.00%	13.61%	2.39%
12/11/1981	16.25%	13.63%	2.62%
12/14/1981	14.00%	13.63%	0.37%
12/15/1981	15.81%	13.63%	2.18%
12/15/1981	16.00%	13.63%	2.37%
12/16/1981	15.25%	13.63%	1.62%
12/17/1981	16.50%	13.63%	2.87%
12/18/1981	15.45%	13.63%	1.82%
12/30/1981	14.25%	13.67%	0.58%
12/30/1981	16.00%	13.67%	2.33%
12/30/1981	16.25%	13.67%	2.58%
12/31/1981	16.15%	13.67%	2.48%
1/4/1982	15.50%	13.67%	1.83%
1/11/1982	14.50%	13.72%	0.78%
1/11/1982	17.00%	13.72%	3.28%
1/13/1982	14.75%	13.74%	1.01%
1/14/1982	15.75%	13.75%	2.00%
1/15/1982	15.00%	13.76%	1.24%
1/15/1982	16.50%	13.76%	2.74%
1/22/1982	16.25%	13.79%	2.46%
1/27/1982	16.84%	13.81%	3.03%
1/28/1982	13.00%	13.81%	-0.81%
1/29/1982	15.50%	13.82%	1.68%
2/1/1982	15.85%	13.82%	2.03%
2/3/1982	16.44%	13.84%	2.60%
2/8/1982	15.50%	13.86%	1.64%
2/11/1982	16.00%	13.88%	2.12%
2/11/1982	16.20%	13.88%	2.32%
2/17/1982	15.00%	13.89%	1.11%
2/19/1982	15.17%	13.89%	1.28%
2/26/1982	15.25%	13.89%	1.36%
3/1/1982	15.03%	13.89%	1.14%
3/1/1982	16.00%	13.89%	2.11%
3/3/1982	15.00%	13.88%	1.12%
3/8/1982	17.10%	13.88%	3.22%
3/12/1982	16.25%	13.88%	2.37%
3/17/1982	17.30%	13.88%	3.42%
3/22/1982	15.10%	13.89%	1.21%
3/27/1982	15.40%	13.89%	1.51%
3/30/1982	15.50%	13.90%	1.60%
3/31/1982	17.00%	13.91%	3.09%
4/1/1982	14.70%	13.91%	0.79%
4/1/1982	16.50%	13.91%	2.59%
4/2/1982	15.50%	13.91%	1.59%
4/5/1982	15.50%	13.92%	1.58%
4/8/1982	16.40%	13.93%	2.47%
4/13/1982	14.50%	13.94%	0.56%
4/23/1982	15.75%	13.94%	1.81%
4/27/1982	15.00%	13.94%	1.06%
4/28/1982	15.75%	13.94%	1.81%
4/30/1982	14.70%	13.94%	0.76%
4/30/1982	15.50%	13.94%	1.56%
5/3/1982	16.60%	13.94%	2.66%
5/4/1982	16.00%	13.94%	2.06%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/14/1982	15.50%	13.92%	1.58%
5/18/1982	15.42%	13.92%	1.50%
5/19/1982	14.69%	13.92%	0.77%
5/20/1982	15.00%	13.91%	1.09%
5/20/1982	15.10%	13.91%	1.19%
5/20/1982	15.50%	13.91%	1.59%
5/20/1982	16.30%	13.91%	2.39%
5/21/1982	17.75%	13.91%	3.84%
5/27/1982	15.00%	13.89%	1.11%
5/28/1982	15.50%	13.89%	1.61%
5/28/1982	17.00%	13.89%	3.11%
6/1/1982	13.75%	13.89%	-0.14%
6/1/1982	16.60%	13.89%	2.71%
6/9/1982	17.86%	13.88%	3.98%
6/14/1982	15.75%	13.88%	1.87%
6/15/1982	14.85%	13.88%	0.97%
6/18/1982	15.50%	13.87%	1.63%
6/21/1982	14.90%	13.87%	1.03%
6/23/1982	16.00%	13.86%	2.14%
6/23/1982	16.17%	13.86%	2.31%
6/24/1982	14.85%	13.86%	0.99%
6/25/1982	14.70%	13.86%	0.84%
7/1/1982	16.00%	13.84%	2.16%
7/2/1982	15.62%	13.84%	1.78%
7/2/1982	17.00%	13.84%	3.16%
7/13/1982	14.00%	13.82%	0.18%
7/13/1982	16.80%	13.82%	2.98%
7/14/1982	15.76%	13.82%	1.94%
7/14/1982	16.02%	13.82%	2.20%
7/19/1982	16.50%	13.80%	2.70%
7/22/1982	14.50%	13.77%	0.73%
7/22/1982	17.00%	13.77%	3.23%
7/27/1982	16.75%	13.75%	3.00%
7/29/1982	16.50%	13.74%	2.76%
8/11/1982	17.50%	13.68%	3.82%
8/18/1982	17.07%	13.63%	3.44%
8/20/1982	15.73%	13.60%	2.13%
8/25/1982	16.00%	13.57%	2.43%
8/26/1982	15.50%	13.56%	1.94%
8/30/1982	15.00%	13.55%	1.45%
9/3/1982	16.20%	13.53%	2.67%
9/8/1982	15.00%	13.52%	1.48%
9/15/1982	13.08%	13.50%	-0.42%
9/15/1982	16.25%	13.50%	2.75%
9/16/1982	16.00%	13.50%	2.50%
9/17/1982	15.25%	13.50%	1.75%
9/23/1982	17.17%	13.47%	3.70%
9/24/1982	14.50%	13.46%	1.04%
9/27/1982	15.25%	13.46%	1.79%
10/1/1982	15.50%	13.42%	2.08%
10/15/1982	15.90%	13.32%	2.58%
10/22/1982	15.75%	13.24%	2.51%
10/22/1982	17.15%	13.24%	3.91%
10/29/1982	15.54%	13.16%	2.38%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/1/1982	15.50%	13.15%	2.35%
11/3/1982	17.20%	13.13%	4.07%
11/4/1982	16.25%	13.11%	3.14%
11/5/1982	16.20%	13.09%	3.11%
11/9/1982	16.00%	13.05%	2.95%
11/23/1982	15.50%	12.89%	2.61%
11/23/1982	15.85%	12.89%	2.96%
11/30/1982	16.50%	12.81%	3.69%
12/1/1982	17.04%	12.79%	4.25%
12/6/1982	15.00%	12.73%	2.27%
12/6/1982	16.35%	12.73%	3.62%
12/10/1982	15.50%	12.66%	2.84%
12/13/1982	16.00%	12.65%	3.35%
12/14/1982	15.30%	12.63%	2.67%
12/14/1982	16.40%	12.63%	3.77%
12/20/1982	16.00%	12.57%	3.43%
12/21/1982	14.75%	12.56%	2.19%
12/21/1982	15.85%	12.56%	3.29%
12/22/1982	16.25%	12.54%	3.71%
12/22/1982	16.58%	12.54%	4.04%
12/22/1982	16.75%	12.54%	4.21%
12/29/1982	14.90%	12.48%	2.42%
12/29/1982	16.25%	12.48%	3.77%
12/30/1982	16.00%	12.47%	3.53%
12/30/1982	16.35%	12.47%	3.88%
12/30/1982	16.77%	12.47%	4.30%
1/5/1983	17.33%	12.40%	4.93%
1/11/1983	15.90%	12.34%	3.56%
1/12/1983	14.63%	12.33%	2.30%
1/12/1983	15.50%	12.33%	3.17%
1/20/1983	17.75%	12.24%	5.51%
1/21/1983	15.00%	12.22%	2.78%
1/24/1983	14.50%	12.21%	2.29%
1/24/1983	15.50%	12.21%	3.29%
1/25/1983	15.85%	12.19%	3.66%
1/27/1983	16.14%	12.17%	3.97%
2/1/1983	18.50%	12.13%	6.37%
2/4/1983	14.00%	12.10%	1.90%
2/10/1983	15.00%	12.06%	2.94%
2/21/1983	15.50%	11.98%	3.52%
2/22/1983	15.50%	11.97%	3.53%
2/23/1983	15.10%	11.96%	3.14%
2/23/1983	16.00%	11.96%	4.04%
3/2/1983	15.25%	11.89%	3.36%
3/9/1983	15.20%	11.82%	3.38%
3/15/1983	13.00%	11.77%	1.23%
3/18/1983	15.25%	11.73%	3.52%
3/23/1983	15.40%	11.69%	3.71%
3/24/1983	15.00%	11.67%	3.33%
3/29/1983	15.50%	11.63%	3.87%
3/30/1983	16.71%	11.61%	5.10%
3/31/1983	15.00%	11.59%	3.41%
4/4/1983	15.20%	11.58%	3.62%
4/8/1983	15.50%	11.51%	3.99%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/11/1983	14.81%	11.49%	3.32%
4/19/1983	14.50%	11.38%	3.12%
4/20/1983	16.00%	11.36%	4.64%
4/29/1983	16.00%	11.24%	4.76%
5/1/1983	14.50%	11.24%	3.26%
5/9/1983	15.50%	11.15%	4.35%
5/11/1983	16.46%	11.12%	5.34%
5/12/1983	14.14%	11.11%	3.03%
5/18/1983	15.00%	11.05%	3.95%
5/23/1983	14.90%	11.01%	3.89%
5/23/1983	15.50%	11.01%	4.49%
5/25/1983	15.50%	10.98%	4.52%
5/27/1983	15.00%	10.96%	4.04%
5/31/1983	14.00%	10.95%	3.05%
5/31/1983	15.50%	10.95%	4.55%
6/2/1983	14.50%	10.93%	3.57%
6/17/1983	15.03%	10.84%	4.19%
7/1/1983	14.80%	10.78%	4.02%
7/1/1983	14.90%	10.78%	4.12%
7/8/1983	16.25%	10.76%	5.49%
7/13/1983	13.20%	10.75%	2.45%
7/19/1983	15.00%	10.74%	4.26%
7/19/1983	15.10%	10.74%	4.36%
7/25/1983	16.25%	10.73%	5.52%
7/28/1983	15.90%	10.74%	5.16%
8/3/1983	16.34%	10.75%	5.59%
8/3/1983	16.50%	10.75%	5.75%
8/19/1983	15.00%	10.80%	4.20%
8/22/1983	15.50%	10.80%	4.70%
8/22/1983	16.40%	10.80%	5.60%
8/31/1983	14.75%	10.84%	3.91%
9/7/1983	15.00%	10.86%	4.14%
9/14/1983	15.78%	10.89%	4.89%
9/16/1983	15.00%	10.90%	4.10%
9/19/1983	14.50%	10.91%	3.59%
9/20/1983	16.50%	10.91%	5.59%
9/28/1983	14.50%	10.94%	3.56%
9/29/1983	15.50%	10.95%	4.55%
9/30/1983	15.25%	10.95%	4.30%
9/30/1983	16.15%	10.95%	5.20%
10/4/1983	14.80%	10.96%	3.84%
10/7/1983	16.00%	10.97%	5.03%
10/13/1983	15.52%	10.99%	4.53%
10/17/1983	15.50%	11.00%	4.50%
10/18/1983	14.50%	11.00%	3.50%
10/19/1983	16.25%	11.01%	5.24%
10/19/1983	16.50%	11.01%	5.49%
10/26/1983	15.00%	11.04%	3.96%
10/27/1983	15.20%	11.04%	4.16%
11/1/1983	16.00%	11.06%	4.94%
11/9/1983	14.90%	11.09%	3.81%
11/10/1983	14.35%	11.10%	3.25%
11/23/1983	16.00%	11.13%	4.87%
11/23/1983	16.15%	11.13%	5.02%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/30/1983	15.00%	11.14%	3.86%
12/5/1983	15.25%	11.15%	4.10%
12/6/1983	15.07%	11.15%	3.92%
12/8/1983	15.90%	11.16%	4.74%
12/9/1983	14.75%	11.17%	3.58%
12/12/1983	14.50%	11.17%	3.33%
12/15/1983	15.56%	11.19%	4.37%
12/19/1983	14.80%	11.21%	3.59%
12/20/1983	14.69%	11.22%	3.47%
12/20/1983	16.00%	11.22%	4.78%
12/20/1983	16.25%	11.22%	5.03%
12/22/1983	14.75%	11.23%	3.52%
12/22/1983	15.75%	11.23%	4.52%
1/3/1984	14.75%	11.27%	3.48%
1/10/1984	15.90%	11.30%	4.60%
1/12/1984	15.60%	11.31%	4.29%
1/18/1984	13.75%	11.33%	2.42%
1/19/1984	15.90%	11.33%	4.57%
1/30/1984	16.10%	11.37%	4.73%
1/31/1984	15.25%	11.37%	3.88%
2/1/1984	14.80%	11.38%	3.42%
2/6/1984	13.75%	11.40%	2.35%
2/6/1984	14.75%	11.40%	3.35%
2/9/1984	15.25%	11.42%	3.83%
2/15/1984	15.70%	11.44%	4.26%
2/20/1984	15.00%	11.46%	3.54%
2/20/1984	15.00%	11.46%	3.54%
2/22/1984	14.75%	11.47%	3.28%
2/28/1984	14.50%	11.51%	2.99%
3/2/1984	14.25%	11.54%	2.71%
3/20/1984	16.00%	11.64%	4.36%
3/23/1984	15.50%	11.67%	3.83%
3/26/1984	14.71%	11.68%	3.03%
4/2/1984	15.50%	11.71%	3.79%
4/6/1984	14.74%	11.75%	2.99%
4/11/1984	15.72%	11.78%	3.94%
4/17/1984	15.00%	11.81%	3.19%
4/18/1984	16.20%	11.82%	4.38%
4/25/1984	14.64%	11.85%	2.79%
4/30/1984	14.40%	11.87%	2.53%
5/16/1984	14.69%	11.98%	2.71%
5/16/1984	15.00%	11.98%	3.02%
5/22/1984	14.40%	12.02%	2.38%
5/29/1984	15.10%	12.06%	3.04%
6/13/1984	15.25%	12.15%	3.10%
6/15/1984	15.60%	12.17%	3.43%
6/22/1984	16.25%	12.21%	4.04%
6/29/1984	15.25%	12.26%	2.99%
7/2/1984	13.35%	12.27%	1.08%
7/10/1984	16.00%	12.31%	3.69%
7/12/1984	16.50%	12.32%	4.18%
7/13/1984	16.25%	12.33%	3.92%
7/17/1984	14.14%	12.35%	1.79%
7/18/1984	15.30%	12.36%	2.94%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/18/1984	15.50%	12.36%	3.14%
7/19/1984	14.30%	12.37%	1.93%
7/24/1984	16.79%	12.39%	4.40%
7/31/1984	16.00%	12.43%	3.57%
8/3/1984	14.25%	12.44%	1.81%
8/17/1984	14.30%	12.49%	1.81%
8/20/1984	15.00%	12.49%	2.51%
8/27/1984	16.30%	12.51%	3.79%
8/31/1984	15.55%	12.52%	3.03%
9/6/1984	16.00%	12.53%	3.47%
9/10/1984	14.75%	12.54%	2.21%
9/13/1984	15.00%	12.55%	2.45%
9/17/1984	17.38%	12.56%	4.82%
9/26/1984	14.50%	12.57%	1.93%
9/28/1984	15.00%	12.57%	2.43%
9/28/1984	16.25%	12.57%	3.68%
10/9/1984	14.75%	12.58%	2.17%
10/12/1984	15.60%	12.59%	3.01%
10/22/1984	15.00%	12.59%	2.41%
10/26/1984	16.40%	12.58%	3.82%
10/31/1984	16.25%	12.58%	3.67%
11/7/1984	15.60%	12.58%	3.02%
11/9/1984	16.00%	12.58%	3.42%
11/14/1984	15.75%	12.58%	3.17%
11/20/1984	15.25%	12.58%	2.67%
11/20/1984	15.92%	12.58%	3.34%
11/23/1984	15.00%	12.58%	2.42%
11/28/1984	16.15%	12.57%	3.58%
12/3/1984	15.80%	12.56%	3.24%
12/4/1984	16.50%	12.56%	3.94%
12/18/1984	16.40%	12.53%	3.87%
12/19/1984	14.75%	12.53%	2.22%
12/19/1984	15.00%	12.53%	2.47%
12/20/1984	16.00%	12.53%	3.47%
12/28/1984	16.00%	12.50%	3.50%
1/3/1985	14.75%	12.49%	2.26%
1/10/1985	15.75%	12.47%	3.28%
1/11/1985	16.30%	12.46%	3.84%
1/23/1985	15.80%	12.43%	3.37%
1/24/1985	15.82%	12.43%	3.39%
1/25/1985	16.75%	12.42%	4.33%
1/30/1985	14.90%	12.40%	2.50%
1/31/1985	14.75%	12.39%	2.36%
2/8/1985	14.47%	12.35%	2.12%
3/1/1985	13.84%	12.31%	1.53%
3/8/1985	16.85%	12.28%	4.57%
3/14/1985	15.50%	12.25%	3.25%
3/15/1985	15.62%	12.25%	3.37%
3/29/1985	15.62%	12.17%	3.45%
4/3/1985	14.60%	12.14%	2.46%
4/9/1985	15.50%	12.11%	3.39%
4/16/1985	15.70%	12.06%	3.64%
4/22/1985	14.00%	12.02%	1.98%
4/26/1985	15.50%	11.98%	3.52%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/29/1985	15.00%	11.97%	3.03%
5/2/1985	14.68%	11.94%	2.74%
5/8/1985	15.62%	11.89%	3.73%
5/10/1985	16.50%	11.87%	4.63%
5/29/1985	14.61%	11.73%	2.88%
5/31/1985	16.00%	11.71%	4.29%
6/14/1985	15.50%	11.61%	3.89%
7/9/1985	15.00%	11.45%	3.55%
7/16/1985	14.50%	11.39%	3.11%
7/26/1985	14.50%	11.33%	3.17%
8/2/1985	14.80%	11.29%	3.51%
8/7/1985	15.00%	11.27%	3.73%
8/28/1985	14.25%	11.15%	3.10%
8/28/1985	15.50%	11.15%	4.35%
8/29/1985	14.50%	11.15%	3.35%
9/9/1985	14.60%	11.11%	3.49%
9/9/1985	14.90%	11.11%	3.79%
9/17/1985	14.90%	11.08%	3.82%
9/23/1985	15.00%	11.06%	3.94%
9/27/1985	15.50%	11.05%	4.45%
9/27/1985	15.80%	11.05%	4.75%
10/2/1985	14.00%	11.03%	2.97%
10/2/1985	14.75%	11.03%	3.72%
10/3/1985	15.25%	11.03%	4.22%
10/24/1985	15.40%	10.96%	4.44%
10/24/1985	15.82%	10.96%	4.86%
10/24/1985	15.85%	10.96%	4.89%
10/28/1985	16.00%	10.95%	5.05%
10/29/1985	16.65%	10.94%	5.71%
10/31/1985	15.06%	10.93%	4.13%
11/4/1985	14.50%	10.92%	3.58%
11/7/1985	15.50%	10.90%	4.60%
11/8/1985	14.30%	10.89%	3.41%
12/12/1985	14.75%	10.73%	4.02%
12/18/1985	15.00%	10.69%	4.31%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	14.50%	10.67%	3.83%
12/20/1985	15.00%	10.67%	4.33%
1/24/1986	15.40%	10.41%	4.99%
1/31/1986	15.00%	10.35%	4.65%
2/5/1986	15.00%	10.32%	4.68%
2/5/1986	15.75%	10.32%	5.43%
2/10/1986	13.30%	10.29%	3.01%
2/11/1986	12.50%	10.28%	2.22%
2/14/1986	14.40%	10.24%	4.16%
2/18/1986	16.00%	10.23%	5.77%
2/24/1986	14.50%	10.18%	4.32%
2/26/1986	14.00%	10.15%	3.85%
3/5/1986	14.90%	10.08%	4.82%
3/11/1986	14.50%	10.02%	4.48%
3/12/1986	13.50%	10.00%	3.50%
3/27/1986	14.10%	9.86%	4.24%
3/31/1986	13.50%	9.84%	3.66%
4/1/1986	14.00%	9.83%	4.17%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/2/1986	15.50%	9.81%	5.69%
4/4/1986	15.00%	9.78%	5.22%
4/14/1986	13.40%	9.69%	3.71%
4/23/1986	15.00%	9.57%	5.43%
5/16/1986	14.50%	9.32%	5.18%
5/16/1986	14.50%	9.32%	5.18%
5/29/1986	13.90%	9.19%	4.71%
5/30/1986	15.10%	9.18%	5.92%
6/2/1986	12.81%	9.17%	3.64%
6/11/1986	14.00%	9.07%	4.93%
6/24/1986	16.63%	8.94%	7.69%
6/26/1986	12.00%	8.91%	3.09%
6/26/1986	14.75%	8.91%	5.84%
6/30/1986	13.00%	8.87%	4.13%
7/10/1986	14.34%	8.75%	5.59%
7/11/1986	12.75%	8.73%	4.02%
7/14/1986	12.60%	8.71%	3.89%
7/17/1986	12.40%	8.66%	3.74%
7/25/1986	14.25%	8.57%	5.68%
8/6/1986	13.50%	8.44%	5.06%
8/14/1986	13.50%	8.35%	5.15%
9/16/1986	12.75%	8.06%	4.69%
9/19/1986	13.25%	8.03%	5.22%
10/1/1986	14.00%	7.95%	6.05%
10/3/1986	13.40%	7.93%	5.47%
10/31/1986	13.50%	7.77%	5.73%
11/5/1986	13.00%	7.75%	5.25%
12/3/1986	12.90%	7.58%	5.32%
12/4/1986	14.44%	7.58%	6.86%
12/16/1986	13.60%	7.52%	6.08%
12/22/1986	13.80%	7.51%	6.29%
12/30/1986	13.00%	7.49%	5.51%
1/2/1987	13.00%	7.49%	5.51%
1/12/1987	12.40%	7.47%	4.93%
1/27/1987	12.71%	7.46%	5.25%
3/2/1987	12.47%	7.47%	5.00%
3/3/1987	13.60%	7.47%	6.13%
3/4/1987	12.38%	7.47%	4.91%
3/10/1987	13.50%	7.47%	6.03%
3/13/1987	13.00%	7.47%	5.53%
3/31/1987	13.00%	7.46%	5.54%
4/6/1987	13.00%	7.47%	5.53%
4/14/1987	12.50%	7.49%	5.01%
4/16/1987	14.50%	7.50%	7.00%
4/27/1987	12.00%	7.54%	4.46%
5/5/1987	12.85%	7.58%	5.27%
5/12/1987	12.65%	7.62%	5.03%
5/28/1987	13.50%	7.70%	5.80%
6/15/1987	13.20%	7.78%	5.42%
6/29/1987	15.00%	7.83%	7.17%
6/30/1987	12.50%	7.84%	4.66%
7/8/1987	12.00%	7.86%	4.14%
7/10/1987	12.90%	7.86%	5.04%
7/15/1987	13.50%	7.88%	5.62%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
7/16/1987	13.50%	7.88%	5.62%
7/16/1987	15.00%	7.88%	7.12%
7/27/1987	13.00%	7.92%	5.08%
7/27/1987	13.40%	7.92%	5.48%
7/27/1987	13.50%	7.92%	5.58%
7/31/1987	12.98%	7.95%	5.03%
8/26/1987	12.63%	8.06%	4.57%
8/26/1987	12.75%	8.06%	4.69%
8/27/1987	13.25%	8.06%	5.19%
9/9/1987	13.00%	8.14%	4.86%
9/30/1987	12.75%	8.31%	4.44%
9/30/1987	13.00%	8.31%	4.69%
10/2/1987	11.50%	8.33%	3.17%
10/15/1987	13.00%	8.43%	4.57%
11/2/1987	13.00%	8.55%	4.45%
11/19/1987	13.00%	8.64%	4.36%
11/30/1987	12.00%	8.68%	3.32%
12/3/1987	14.20%	8.70%	5.50%
12/15/1987	13.25%	8.77%	4.48%
12/16/1987	13.50%	8.78%	4.72%
12/16/1987	13.72%	8.78%	4.94%
12/17/1987	11.75%	8.79%	2.96%
12/18/1987	13.50%	8.80%	4.70%
12/21/1987	12.01%	8.81%	3.20%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.00%	8.81%	3.19%
12/22/1987	12.75%	8.81%	3.94%
12/22/1987	13.00%	8.81%	4.19%
1/20/1988	13.80%	8.94%	4.86%
1/26/1988	13.90%	8.95%	4.95%
1/29/1988	13.20%	8.96%	4.24%
2/4/1988	12.60%	8.96%	3.64%
3/1/1988	11.56%	8.94%	2.62%
3/23/1988	12.87%	8.92%	3.95%
3/24/1988	11.24%	8.92%	2.32%
3/30/1988	12.72%	8.92%	3.80%
4/1/1988	12.50%	8.92%	3.58%
4/7/1988	13.25%	8.93%	4.32%
4/25/1988	10.96%	8.96%	2.00%
5/3/1988	12.91%	8.97%	3.94%
5/11/1988	13.50%	8.99%	4.51%
5/16/1988	13.00%	8.99%	4.01%
6/30/1988	12.75%	9.00%	3.75%
7/1/1988	12.75%	8.99%	3.76%
7/20/1988	13.40%	8.96%	4.44%
8/5/1988	12.75%	8.92%	3.83%
8/23/1988	11.70%	8.93%	2.77%
8/29/1988	12.75%	8.94%	3.81%
8/30/1988	13.50%	8.94%	4.56%
9/8/1988	12.60%	8.95%	3.65%
10/13/1988	13.10%	8.93%	4.17%
12/19/1988	13.00%	9.02%	3.98%
12/20/1988	12.25%	9.02%	3.23%
12/20/1988	13.00%	9.02%	3.98%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/21/1988	12.90%	9.02%	3.88%
12/27/1988	13.00%	9.03%	3.97%
12/28/1988	13.10%	9.03%	4.07%
12/30/1988	13.40%	9.04%	4.36%
1/27/1989	13.00%	9.05%	3.95%
1/31/1989	13.00%	9.05%	3.95%
2/17/1989	13.00%	9.05%	3.95%
2/20/1989	12.40%	9.05%	3.35%
3/1/1989	12.76%	9.05%	3.71%
3/8/1989	13.00%	9.05%	3.95%
3/30/1989	14.00%	9.05%	4.95%
4/5/1989	14.20%	9.05%	5.15%
4/18/1989	13.00%	9.05%	3.95%
5/5/1989	12.40%	9.05%	3.35%
6/2/1989	13.20%	9.00%	4.20%
6/8/1989	13.50%	8.98%	4.52%
6/27/1989	13.25%	8.91%	4.34%
6/30/1989	13.00%	8.90%	4.10%
8/14/1989	12.50%	8.77%	3.73%
9/28/1989	12.25%	8.63%	3.62%
10/24/1989	12.50%	8.54%	3.96%
11/9/1989	13.00%	8.49%	4.51%
12/15/1989	13.00%	8.34%	4.66%
12/20/1989	12.90%	8.32%	4.58%
12/21/1989	12.90%	8.31%	4.59%
12/27/1989	12.50%	8.29%	4.21%
12/27/1989	13.00%	8.29%	4.71%
1/10/1990	12.80%	8.24%	4.56%
1/11/1990	12.90%	8.24%	4.66%
1/17/1990	12.80%	8.22%	4.58%
1/26/1990	12.00%	8.20%	3.80%
2/9/1990	12.10%	8.17%	3.93%
2/24/1990	12.86%	8.15%	4.71%
3/30/1990	12.90%	8.16%	4.74%
4/4/1990	15.76%	8.17%	7.59%
4/12/1990	12.52%	8.18%	4.34%
4/19/1990	12.75%	8.20%	4.55%
5/21/1990	12.10%	8.28%	3.82%
5/29/1990	12.40%	8.30%	4.10%
5/31/1990	12.00%	8.30%	3.70%
6/4/1990	12.90%	8.30%	4.60%
6/6/1990	12.25%	8.31%	3.94%
6/15/1990	13.20%	8.32%	4.88%
6/20/1990	12.92%	8.32%	4.60%
6/27/1990	12.90%	8.33%	4.57%
6/29/1990	12.50%	8.33%	4.17%
7/6/1990	12.10%	8.34%	3.76%
7/6/1990	12.35%	8.34%	4.01%
8/10/1990	12.55%	8.41%	4.14%
8/16/1990	13.21%	8.43%	4.78%
8/22/1990	13.10%	8.45%	4.65%
8/24/1990	13.00%	8.46%	4.54%
9/26/1990	11.45%	8.59%	2.86%
10/2/1990	13.00%	8.61%	4.39%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/5/1990	12.84%	8.62%	4.22%
10/19/1990	13.00%	8.67%	4.33%
10/25/1990	12.30%	8.68%	3.62%
11/21/1990	12.70%	8.69%	4.01%
12/13/1990	12.30%	8.67%	3.63%
12/17/1990	12.87%	8.67%	4.20%
12/18/1990	13.10%	8.67%	4.43%
12/19/1990	12.00%	8.66%	3.34%
12/20/1990	12.75%	8.66%	4.09%
12/21/1990	12.50%	8.66%	3.84%
12/27/1990	12.79%	8.66%	4.13%
1/2/1991	13.10%	8.65%	4.45%
1/4/1991	12.50%	8.65%	3.85%
1/15/1991	12.75%	8.64%	4.11%
1/25/1991	11.70%	8.63%	3.07%
2/4/1991	12.50%	8.60%	3.90%
2/7/1991	12.50%	8.59%	3.91%
2/12/1991	13.00%	8.58%	4.43%
2/14/1991	12.72%	8.57%	4.15%
2/22/1991	12.80%	8.55%	4.25%
3/6/1991	13.10%	8.53%	4.57%
3/8/1991	12.30%	8.52%	3.78%
3/8/1991	13.00%	8.52%	4.48%
4/22/1991	13.00%	8.49%	4.51%
5/7/1991	13.50%	8.47%	5.03%
5/13/1991	13.25%	8.47%	4.78%
5/30/1991	12.75%	8.44%	4.31%
6/12/1991	12.00%	8.41%	3.59%
6/25/1991	11.70%	8.39%	3.31%
6/28/1991	12.50%	8.38%	4.12%
7/1/1991	12.00%	8.38%	3.62%
7/3/1991	12.50%	8.37%	4.13%
7/19/1991	12.10%	8.34%	3.76%
8/1/1991	12.90%	8.32%	4.58%
8/16/1991	13.20%	8.29%	4.91%
9/27/1991	12.50%	8.23%	4.27%
9/30/1991	12.25%	8.23%	4.02%
10/17/1991	13.00%	8.20%	4.80%
10/23/1991	12.50%	8.20%	4.30%
10/23/1991	12.55%	8.20%	4.35%
10/31/1991	11.80%	8.19%	3.61%
11/1/1991	12.00%	8.19%	3.81%
11/5/1991	12.25%	8.19%	4.06%
11/12/1991	12.50%	8.18%	4.32%
11/12/1991	13.25%	8.18%	5.07%
11/25/1991	12.40%	8.18%	4.22%
11/26/1991	11.60%	8.18%	3.42%
11/26/1991	12.50%	8.18%	4.32%
11/27/1991	12.10%	8.18%	3.92%
12/18/1991	12.25%	8.15%	4.10%
12/19/1991	12.60%	8.15%	4.45%
12/19/1991	12.80%	8.15%	4.65%
12/20/1991	12.65%	8.14%	4.51%
1/9/1992	12.80%	8.09%	4.71%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
1/16/1992	12.75%	8.07%	4.68%
1/21/1992	12.00%	8.06%	3.94%
1/22/1992	13.00%	8.06%	4.94%
1/27/1992	12.65%	8.05%	4.60%
1/31/1992	12.00%	8.04%	3.96%
2/11/1992	12.40%	8.03%	4.37%
2/25/1992	12.50%	8.01%	4.49%
3/16/1992	11.43%	7.98%	3.45%
3/18/1992	12.28%	7.98%	4.30%
4/2/1992	12.10%	7.95%	4.15%
4/9/1992	11.45%	7.94%	3.51%
4/10/1992	11.50%	7.93%	3.57%
4/14/1992	11.50%	7.93%	3.57%
5/5/1992	11.50%	7.89%	3.61%
5/12/1992	11.87%	7.88%	3.99%
5/12/1992	12.46%	7.88%	4.58%
6/1/1992	12.30%	7.87%	4.43%
6/12/1992	10.90%	7.86%	3.04%
6/26/1992	12.35%	7.85%	4.50%
6/29/1992	11.00%	7.85%	3.15%
6/30/1992	13.00%	7.85%	5.15%
7/13/1992	11.90%	7.84%	4.06%
7/13/1992	13.50%	7.84%	5.66%
7/22/1992	11.20%	7.83%	3.37%
8/3/1992	12.00%	7.81%	4.19%
8/6/1992	12.50%	7.80%	4.70%
9/22/1992	12.00%	7.71%	4.29%
9/28/1992	11.40%	7.71%	3.69%
9/30/1992	11.75%	7.70%	4.05%
10/2/1992	13.00%	7.70%	5.30%
10/12/1992	12.20%	7.70%	4.50%
10/16/1992	13.16%	7.70%	5.46%
10/30/1992	11.75%	7.71%	4.04%
11/3/1992	12.00%	7.71%	4.29%
12/3/1992	11.85%	7.68%	4.17%
12/15/1992	11.00%	7.66%	3.34%
12/16/1992	11.90%	7.66%	4.24%
12/16/1992	12.40%	7.66%	4.74%
12/17/1992	12.00%	7.66%	4.34%
12/22/1992	12.30%	7.65%	4.65%
12/22/1992	12.40%	7.65%	4.75%
12/29/1992	12.25%	7.63%	4.62%
12/30/1992	12.00%	7.63%	4.37%
12/31/1992	11.90%	7.63%	4.27%
1/12/1993	12.00%	7.61%	4.39%
1/21/1993	11.25%	7.59%	3.66%
2/2/1993	11.40%	7.56%	3.84%
2/15/1993	12.30%	7.52%	4.78%
2/24/1993	11.90%	7.49%	4.41%
2/26/1993	11.80%	7.48%	4.32%
2/26/1993	12.20%	7.48%	4.72%
4/23/1993	11.75%	7.29%	4.46%
5/11/1993	11.75%	7.25%	4.50%
5/14/1993	11.50%	7.24%	4.26%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/25/1993	11.50%	7.23%	4.27%
5/28/1993	11.00%	7.22%	3.78%
6/3/1993	12.00%	7.21%	4.79%
6/16/1993	11.50%	7.19%	4.31%
6/18/1993	12.10%	7.18%	4.92%
6/25/1993	11.67%	7.17%	4.50%
7/21/1993	11.38%	7.10%	4.28%
7/23/1993	10.46%	7.09%	3.37%
8/24/1993	11.50%	6.96%	4.54%
9/21/1993	10.50%	6.81%	3.69%
9/29/1993	11.47%	6.77%	4.70%
9/30/1993	11.60%	6.76%	4.84%
11/2/1993	10.80%	6.60%	4.20%
11/12/1993	12.00%	6.57%	5.43%
11/26/1993	11.00%	6.52%	4.48%
12/14/1993	10.55%	6.48%	4.07%
12/16/1993	10.60%	6.48%	4.12%
12/21/1993	11.30%	6.47%	4.83%
1/4/1994	10.07%	6.44%	3.63%
1/13/1994	11.00%	6.42%	4.58%
1/21/1994	11.00%	6.40%	4.60%
1/28/1994	11.35%	6.39%	4.96%
2/3/1994	11.40%	6.38%	5.02%
2/17/1994	10.60%	6.36%	4.24%
2/25/1994	11.25%	6.35%	4.90%
2/25/1994	12.00%	6.35%	5.65%
3/1/1994	11.00%	6.35%	4.65%
3/4/1994	11.00%	6.35%	4.65%
4/25/1994	11.00%	6.41%	4.59%
5/10/1994	11.75%	6.45%	5.30%
5/13/1994	10.50%	6.46%	4.04%
6/3/1994	11.00%	6.54%	4.46%
6/27/1994	11.40%	6.65%	4.75%
8/5/1994	12.75%	6.88%	5.87%
10/31/1994	10.00%	7.33%	2.67%
11/9/1994	10.85%	7.39%	3.46%
11/9/1994	10.85%	7.39%	3.46%
11/18/1994	11.20%	7.45%	3.75%
11/22/1994	11.60%	7.47%	4.13%
11/28/1994	11.06%	7.49%	3.57%
12/8/1994	11.50%	7.54%	3.96%
12/8/1994	11.70%	7.54%	4.16%
12/14/1994	10.95%	7.56%	3.39%
12/15/1994	11.50%	7.57%	3.93%
12/19/1994	11.50%	7.58%	3.92%
12/28/1994	12.15%	7.61%	4.54%
1/9/1995	12.28%	7.64%	4.64%
1/31/1995	11.00%	7.69%	3.31%
2/10/1995	12.60%	7.70%	4.90%
2/17/1995	11.90%	7.70%	4.20%
3/9/1995	11.50%	7.71%	3.79%
3/20/1995	12.00%	7.72%	4.28%
3/23/1995	12.81%	7.72%	5.09%
3/29/1995	11.60%	7.72%	3.88%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/6/1995	11.10%	7.71%	3.39%
4/7/1995	11.00%	7.71%	3.29%
4/19/1995	11.00%	7.70%	3.30%
5/12/1995	11.63%	7.68%	3.95%
5/25/1995	11.20%	7.65%	3.55%
6/9/1995	11.25%	7.60%	3.65%
6/21/1995	12.25%	7.56%	4.69%
6/30/1995	11.10%	7.52%	3.58%
9/11/1995	11.30%	7.20%	4.10%
9/27/1995	11.30%	7.12%	4.18%
9/27/1995	11.50%	7.12%	4.38%
9/27/1995	11.75%	7.12%	4.63%
9/29/1995	11.00%	7.11%	3.89%
11/9/1995	11.38%	6.90%	4.48%
11/9/1995	12.36%	6.90%	5.46%
11/17/1995	11.00%	6.86%	4.14%
12/4/1995	11.35%	6.78%	4.57%
12/11/1995	11.40%	6.74%	4.66%
12/20/1995	11.60%	6.70%	4.90%
12/27/1995	12.00%	6.66%	5.34%
2/5/1996	12.25%	6.48%	5.77%
3/29/1996	10.67%	6.42%	4.25%
4/8/1996	11.00%	6.42%	4.58%
4/11/1996	12.59%	6.43%	6.16%
4/11/1996	12.59%	6.43%	6.16%
4/24/1996	11.25%	6.43%	4.82%
4/30/1996	11.00%	6.43%	4.57%
5/13/1996	11.00%	6.44%	4.56%
5/23/1996	11.25%	6.43%	4.82%
6/25/1996	11.25%	6.48%	4.77%
6/27/1996	11.20%	6.48%	4.72%
8/12/1996	10.40%	6.57%	3.83%
9/27/1996	11.00%	6.71%	4.29%
10/16/1996	12.25%	6.76%	5.49%
11/5/1996	11.00%	6.81%	4.19%
11/26/1996	11.30%	6.83%	4.47%
12/18/1996	11.75%	6.83%	4.92%
12/31/1996	11.50%	6.83%	4.67%
1/3/1997	10.70%	6.83%	3.87%
2/13/1997	11.80%	6.82%	4.98%
2/20/1997	11.80%	6.82%	4.98%
3/31/1997	10.02%	6.80%	3.22%
4/2/1997	11.65%	6.80%	4.85%
4/28/1997	11.50%	6.81%	4.69%
4/29/1997	11.70%	6.81%	4.89%
7/17/1997	12.00%	6.77%	5.23%
12/12/1997	11.00%	6.60%	4.40%
12/23/1997	11.12%	6.57%	4.55%
2/2/1998	12.75%	6.39%	6.36%
3/2/1998	11.25%	6.29%	4.96%
3/6/1998	10.75%	6.27%	4.48%
3/20/1998	10.50%	6.22%	4.28%
4/30/1998	12.20%	6.12%	6.08%
7/10/1998	11.40%	5.94%	5.46%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/15/1998	11.90%	5.78%	6.12%
11/30/1998	12.60%	5.58%	7.02%
12/10/1998	12.20%	5.54%	6.66%
12/17/1998	12.10%	5.52%	6.58%
2/5/1999	10.30%	5.38%	4.92%
3/4/1999	10.50%	5.34%	5.16%
4/6/1999	10.94%	5.32%	5.62%
7/29/1999	10.75%	5.52%	5.23%
9/23/1999	10.75%	5.70%	5.05%
11/17/1999	11.10%	5.90%	5.20%
1/7/2000	11.50%	6.05%	5.45%
1/7/2000	11.50%	6.05%	5.45%
2/17/2000	10.60%	6.17%	4.43%
3/28/2000	11.25%	6.20%	5.05%
5/24/2000	11.00%	6.18%	4.82%
7/18/2000	12.20%	6.16%	6.04%
9/29/2000	11.16%	6.03%	5.13%
11/28/2000	12.90%	5.89%	7.01%
11/30/2000	12.10%	5.88%	6.22%
1/23/2001	11.25%	5.79%	5.46%
2/8/2001	11.50%	5.77%	5.73%
5/8/2001	10.75%	5.62%	5.13%
6/26/2001	11.00%	5.62%	5.38%
7/25/2001	11.02%	5.60%	5.42%
7/25/2001	11.02%	5.60%	5.42%
7/31/2001	11.00%	5.59%	5.41%
8/31/2001	10.50%	5.56%	4.94%
9/7/2001	10.75%	5.55%	5.20%
9/10/2001	11.00%	5.55%	5.45%
9/20/2001	10.00%	5.55%	4.45%
10/24/2001	10.30%	5.54%	4.76%
11/28/2001	10.60%	5.49%	5.11%
12/3/2001	12.88%	5.49%	7.39%
12/20/2001	12.50%	5.50%	7.00%
1/22/2002	10.00%	5.50%	4.50%
3/27/2002	10.10%	5.45%	4.65%
4/22/2002	11.80%	5.45%	6.35%
5/28/2002	10.17%	5.46%	4.71%
6/10/2002	12.00%	5.47%	6.53%
6/18/2002	11.16%	5.48%	5.68%
6/20/2002	11.00%	5.48%	5.52%
6/20/2002	12.30%	5.48%	6.82%
7/15/2002	11.00%	5.48%	5.52%
9/12/2002	12.30%	5.45%	6.85%
9/26/2002	10.45%	5.41%	5.04%
12/4/2002	11.55%	5.29%	6.26%
12/13/2002	11.75%	5.27%	6.48%
12/20/2002	11.40%	5.25%	6.15%
1/8/2003	11.10%	5.19%	5.91%
1/31/2003	12.45%	5.13%	7.32%
2/28/2003	12.30%	5.05%	7.25%
3/6/2003	10.75%	5.03%	5.72%
3/7/2003	9.96%	5.02%	4.94%
3/20/2003	12.00%	4.98%	7.02%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/3/2003	12.00%	4.96%	7.04%
4/15/2003	11.15%	4.94%	6.21%
6/25/2003	10.75%	4.79%	5.96%
6/26/2003	10.75%	4.79%	5.96%
7/9/2003	9.75%	4.79%	4.96%
7/16/2003	9.75%	4.79%	4.96%
7/25/2003	9.50%	4.80%	4.70%
8/26/2003	10.50%	4.83%	5.67%
12/17/2003	9.85%	4.94%	4.91%
12/17/2003	10.70%	4.94%	5.76%
12/18/2003	11.50%	4.94%	6.56%
12/19/2003	12.00%	4.94%	7.06%
12/19/2003	12.00%	4.94%	7.06%
12/23/2003	10.50%	4.94%	5.56%
1/13/2004	12.00%	4.95%	7.05%
3/2/2004	10.75%	4.99%	5.76%
3/26/2004	10.25%	5.02%	5.23%
4/5/2004	11.25%	5.03%	6.22%
5/18/2004	10.50%	5.07%	5.43%
5/25/2004	10.25%	5.08%	5.17%
5/27/2004	10.25%	5.08%	5.17%
6/2/2004	11.22%	5.08%	6.14%
6/30/2004	10.50%	5.10%	5.40%
6/30/2004	10.50%	5.10%	5.40%
7/16/2004	11.60%	5.11%	6.49%
8/25/2004	10.25%	5.10%	5.15%
9/9/2004	10.40%	5.10%	5.30%
11/9/2004	10.50%	5.07%	5.43%
11/23/2004	11.00%	5.06%	5.94%
12/14/2004	10.97%	5.07%	5.90%
12/21/2004	11.25%	5.07%	6.18%
12/21/2004	11.50%	5.07%	6.43%
12/22/2004	10.70%	5.07%	5.63%
12/22/2004	11.50%	5.07%	6.43%
12/29/2004	9.85%	5.07%	4.78%
1/6/2005	10.70%	5.08%	5.62%
2/18/2005	10.30%	4.98%	5.32%
2/25/2005	10.50%	4.96%	5.54%
3/10/2005	11.00%	4.93%	6.07%
3/24/2005	10.30%	4.90%	5.40%
4/4/2005	10.00%	4.88%	5.12%
4/7/2005	10.25%	4.87%	5.38%
5/18/2005	10.25%	4.78%	5.47%
5/25/2005	10.75%	4.76%	5.99%
5/26/2005	9.75%	4.76%	4.99%
6/1/2005	9.75%	4.75%	5.00%
7/19/2005	11.50%	4.64%	6.86%
8/5/2005	11.75%	4.62%	7.13%
8/15/2005	10.13%	4.61%	5.52%
9/28/2005	10.00%	4.54%	5.46%
10/4/2005	10.75%	4.54%	6.21%
12/12/2005	11.00%	4.55%	6.45%
12/13/2005	10.75%	4.55%	6.20%
12/21/2005	10.29%	4.54%	5.75%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/21/2005	10.40%	4.54%	5.86%
12/22/2005	11.00%	4.54%	6.46%
12/22/2005	11.15%	4.54%	6.61%
12/28/2005	10.00%	4.54%	5.46%
12/28/2005	10.00%	4.54%	5.46%
1/5/2006	11.00%	4.53%	6.47%
1/27/2006	9.75%	4.52%	5.23%
3/3/2006	10.39%	4.53%	5.86%
4/17/2006	10.20%	4.61%	5.59%
4/26/2006	10.60%	4.64%	5.96%
5/17/2006	11.60%	4.69%	6.91%
6/6/2006	10.00%	4.74%	5.26%
6/27/2006	10.75%	4.80%	5.95%
7/6/2006	10.20%	4.83%	5.37%
7/24/2006	9.60%	4.86%	4.74%
7/26/2006	10.50%	4.86%	5.64%
7/28/2006	10.05%	4.86%	5.19%
8/23/2006	9.55%	4.89%	4.66%
9/1/2006	10.54%	4.90%	5.64%
9/14/2006	10.00%	4.91%	5.09%
10/6/2006	9.67%	4.92%	4.75%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.08%	4.95%	5.13%
11/21/2006	10.12%	4.95%	5.17%
12/1/2006	10.25%	4.95%	5.30%
12/1/2006	10.50%	4.95%	5.55%
12/7/2006	10.75%	4.95%	5.80%
12/21/2006	10.90%	4.95%	5.95%
12/21/2006	11.25%	4.95%	6.30%
12/22/2006	10.25%	4.95%	5.30%
1/5/2007	10.00%	4.95%	5.05%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.10%	4.95%	5.15%
1/11/2007	10.90%	4.95%	5.95%
1/12/2007	10.10%	4.95%	5.15%
1/13/2007	10.40%	4.95%	5.45%
1/19/2007	10.80%	4.94%	5.86%
3/21/2007	11.35%	4.87%	6.48%
3/22/2007	9.75%	4.86%	4.89%
5/15/2007	10.00%	4.81%	5.19%
5/17/2007	10.25%	4.81%	5.44%
5/17/2007	10.25%	4.81%	5.44%
5/22/2007	10.20%	4.80%	5.40%
5/22/2007	10.50%	4.80%	5.70%
5/23/2007	10.70%	4.80%	5.90%
5/25/2007	9.67%	4.80%	4.87%
6/15/2007	9.90%	4.82%	5.08%
6/21/2007	10.20%	4.83%	5.37%
6/22/2007	10.50%	4.83%	5.67%
6/28/2007	10.75%	4.84%	5.91%
7/12/2007	9.67%	4.86%	4.81%
7/19/2007	10.00%	4.87%	5.13%
7/19/2007	10.00%	4.87%	5.13%
8/15/2007	10.40%	4.88%	5.52%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/9/2007	10.00%	4.91%	5.09%
10/17/2007	9.10%	4.91%	4.19%
10/31/2007	9.96%	4.90%	5.06%
11/29/2007	10.90%	4.87%	6.03%
12/6/2007	10.75%	4.86%	5.89%
12/13/2007	9.96%	4.86%	5.10%
12/14/2007	10.70%	4.86%	5.84%
12/14/2007	10.80%	4.86%	5.94%
12/19/2007	10.20%	4.86%	5.34%
12/20/2007	10.20%	4.85%	5.35%
12/20/2007	11.00%	4.85%	6.15%
12/28/2007	10.25%	4.85%	5.40%
12/31/2007	11.25%	4.85%	6.40%
1/8/2008	10.75%	4.83%	5.92%
1/17/2008	10.75%	4.81%	5.94%
1/28/2008	9.40%	4.80%	4.60%
1/30/2008	10.00%	4.79%	5.21%
1/31/2008	10.71%	4.79%	5.92%
2/29/2008	10.25%	4.75%	5.50%
3/12/2008	10.25%	4.73%	5.52%
3/25/2008	9.10%	4.68%	4.42%
4/22/2008	10.25%	4.60%	5.65%
4/24/2008	10.10%	4.60%	5.50%
5/1/2008	10.70%	4.59%	6.11%
5/19/2008	11.00%	4.56%	6.44%
5/27/2008	10.00%	4.55%	5.45%
6/10/2008	10.70%	4.54%	6.16%
6/27/2008	10.50%	4.54%	5.96%
6/27/2008	11.04%	4.54%	6.50%
7/10/2008	10.43%	4.52%	5.91%
7/16/2008	9.40%	4.52%	4.88%
7/30/2008	10.80%	4.51%	6.29%
7/31/2008	10.70%	4.51%	6.19%
8/11/2008	10.25%	4.51%	5.74%
8/26/2008	10.18%	4.50%	5.68%
9/10/2008	10.30%	4.50%	5.80%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/24/2008	10.65%	4.48%	6.17%
9/30/2008	10.20%	4.48%	5.72%
10/8/2008	10.15%	4.46%	5.69%
11/13/2008	10.55%	4.45%	6.10%
11/17/2008	10.20%	4.44%	5.76%
12/1/2008	10.25%	4.40%	5.85%
12/23/2008	11.00%	4.27%	6.73%
12/29/2008	10.00%	4.24%	5.76%
12/29/2008	10.20%	4.24%	5.96%
12/31/2008	10.75%	4.22%	6.53%
1/14/2009	10.50%	4.15%	6.35%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/21/2009	10.50%	4.12%	6.38%
1/27/2009	10.76%	4.09%	6.67%
1/30/2009	10.50%	4.08%	6.42%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
2/4/2009	8.75%	4.06%	4.69%
3/4/2009	10.50%	3.96%	6.54%
3/12/2009	11.50%	3.93%	7.57%
4/2/2009	11.10%	3.85%	7.25%
4/21/2009	10.61%	3.80%	6.81%
4/24/2009	10.00%	3.79%	6.21%
4/30/2009	11.25%	3.78%	7.47%
5/4/2009	10.74%	3.77%	6.97%
5/20/2009	10.25%	3.74%	6.51%
5/28/2009	10.50%	3.74%	6.76%
6/22/2009	10.00%	3.76%	6.24%
6/24/2009	10.80%	3.77%	7.03%
7/8/2009	10.63%	3.77%	6.86%
7/17/2009	10.50%	3.78%	6.72%
8/31/2009	10.25%	3.82%	6.43%
10/14/2009	10.70%	4.01%	6.69%
10/23/2009	10.88%	4.06%	6.82%
11/2/2009	10.70%	4.09%	6.61%
11/3/2009	10.70%	4.10%	6.60%
11/24/2009	10.25%	4.15%	6.10%
11/25/2009	10.75%	4.16%	6.59%
11/30/2009	10.35%	4.17%	6.18%
12/3/2009	10.50%	4.18%	6.32%
12/7/2009	10.70%	4.18%	6.52%
12/16/2009	10.90%	4.21%	6.69%
12/16/2009	11.00%	4.21%	6.79%
12/18/2009	10.40%	4.22%	6.18%
12/18/2009	10.40%	4.22%	6.18%
12/22/2009	10.20%	4.23%	5.97%
12/22/2009	10.40%	4.23%	6.17%
12/22/2009	10.40%	4.23%	6.17%
12/30/2009	10.00%	4.26%	5.74%
1/4/2010	10.80%	4.28%	6.52%
1/11/2010	11.00%	4.30%	6.70%
1/26/2010	10.13%	4.35%	5.78%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.40%	4.35%	6.05%
1/27/2010	10.70%	4.35%	6.35%
2/9/2010	9.80%	4.38%	5.42%
2/18/2010	10.60%	4.40%	6.20%
2/24/2010	10.18%	4.41%	5.77%
3/2/2010	9.63%	4.41%	5.22%
3/4/2010	10.50%	4.41%	6.09%
3/5/2010	10.50%	4.41%	6.09%
3/11/2010	11.90%	4.42%	7.48%
3/17/2010	10.00%	4.41%	5.59%
3/25/2010	10.15%	4.42%	5.73%
4/2/2010	10.10%	4.43%	5.67%
4/27/2010	10.00%	4.46%	5.54%
4/29/2010	9.90%	4.46%	5.44%
4/29/2010	10.06%	4.46%	5.60%
4/29/2010	10.26%	4.46%	5.80%
5/12/2010	10.30%	4.45%	5.85%
5/12/2010	10.30%	4.45%	5.85%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
5/28/2010	10.10%	4.44%	5.66%
5/28/2010	10.20%	4.44%	5.76%
6/7/2010	10.30%	4.44%	5.86%
6/16/2010	10.00%	4.44%	5.56%
6/28/2010	9.67%	4.43%	5.24%
6/28/2010	10.50%	4.43%	6.07%
6/30/2010	9.40%	4.43%	4.97%
7/1/2010	10.25%	4.43%	5.82%
7/15/2010	10.53%	4.43%	6.10%
7/15/2010	10.70%	4.43%	6.27%
7/30/2010	10.70%	4.41%	6.29%
8/4/2010	10.50%	4.41%	6.09%
8/6/2010	9.83%	4.41%	5.42%
8/25/2010	9.90%	4.37%	5.53%
9/3/2010	10.60%	4.35%	6.25%
9/14/2010	10.70%	4.33%	6.37%
9/16/2010	10.00%	4.33%	5.67%
9/16/2010	10.00%	4.33%	5.67%
9/30/2010	9.75%	4.29%	5.46%
10/14/2010	10.35%	4.24%	6.11%
10/28/2010	10.70%	4.21%	6.49%
11/2/2010	10.38%	4.20%	6.18%
11/4/2010	10.70%	4.20%	6.50%
11/19/2010	10.20%	4.18%	6.02%
11/22/2010	10.00%	4.18%	5.82%
12/1/2010	10.13%	4.16%	5.97%
12/6/2010	9.86%	4.15%	5.71%
12/9/2010	10.25%	4.15%	6.10%
12/13/2010	10.70%	4.15%	6.55%
12/14/2010	10.13%	4.15%	5.98%
12/15/2010	10.44%	4.15%	6.29%
12/17/2010	10.00%	4.15%	5.85%
12/20/2010	10.60%	4.15%	6.45%
12/21/2010	10.30%	4.14%	6.16%
12/27/2010	9.90%	4.14%	5.76%
12/29/2010	11.15%	4.14%	7.01%
1/5/2011	10.15%	4.13%	6.02%
1/12/2011	10.30%	4.12%	6.18%
1/13/2011	10.30%	4.12%	6.18%
1/18/2011	10.00%	4.12%	5.88%
1/20/2011	9.30%	4.12%	5.18%
1/20/2011	10.13%	4.12%	6.01%
1/31/2011	9.60%	4.12%	5.48%
2/3/2011	10.00%	4.12%	5.88%
2/25/2011	10.00%	4.14%	5.86%
3/25/2011	9.80%	4.18%	5.62%
3/30/2011	10.00%	4.18%	5.82%
4/12/2011	10.00%	4.21%	5.79%
4/25/2011	10.74%	4.23%	6.51%
4/26/2011	9.67%	4.23%	5.44%
4/27/2011	10.40%	4.24%	6.16%
5/4/2011	10.00%	4.24%	5.76%
5/4/2011	10.00%	4.24%	5.76%
5/24/2011	10.50%	4.27%	6.23%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
6/8/2011	10.75%	4.30%	6.45%
6/16/2011	9.20%	4.32%	4.88%
6/17/2011	9.95%	4.32%	5.63%
7/13/2011	10.20%	4.36%	5.84%
8/1/2011	9.20%	4.39%	4.81%
8/8/2011	10.00%	4.38%	5.62%
8/11/2011	10.00%	4.38%	5.62%
8/12/2011	10.35%	4.37%	5.98%
8/19/2011	10.25%	4.36%	5.89%
9/2/2011	12.88%	4.32%	8.56%
9/22/2011	10.00%	4.24%	5.76%
10/12/2011	10.30%	4.14%	6.16%
10/20/2011	10.50%	4.10%	6.40%
11/30/2011	10.90%	3.87%	7.03%
11/30/2011	10.90%	3.87%	7.03%
12/14/2011	10.00%	3.80%	6.20%
12/14/2011	10.30%	3.80%	6.50%
12/20/2011	10.20%	3.76%	6.44%
12/21/2011	10.20%	3.76%	6.44%
12/22/2011	9.90%	3.75%	6.15%
12/22/2011	10.40%	3.75%	6.65%
12/23/2011	10.19%	3.74%	6.45%
1/25/2012	10.50%	3.57%	6.93%
1/27/2012	10.50%	3.56%	6.94%
2/15/2012	10.20%	3.47%	6.73%
2/23/2012	9.90%	3.44%	6.46%
2/27/2012	10.25%	3.43%	6.82%
2/29/2012	10.40%	3.41%	6.99%
3/29/2012	10.37%	3.32%	7.05%
4/4/2012	10.00%	3.30%	6.70%
4/26/2012	10.00%	3.21%	6.79%
5/2/2012	10.00%	3.18%	6.82%
5/7/2012	9.80%	3.17%	6.63%
5/15/2012	10.00%	3.14%	6.86%
5/29/2012	10.05%	3.11%	6.94%
6/7/2012	10.30%	3.08%	7.22%
6/14/2012	9.40%	3.06%	6.34%
6/15/2012	10.40%	3.06%	7.34%
6/18/2012	9.60%	3.06%	6.54%
6/19/2012	9.25%	3.05%	6.20%
6/26/2012	10.10%	3.04%	7.06%
6/29/2012	10.00%	3.04%	6.96%
7/9/2012	10.20%	3.03%	7.17%
7/16/2012	9.80%	3.02%	6.78%
7/20/2012	9.31%	3.01%	6.30%
7/20/2012	9.81%	3.01%	6.80%
9/13/2012	9.80%	2.94%	6.86%
9/19/2012	9.80%	2.94%	6.86%
9/19/2012	10.05%	2.94%	7.11%
9/26/2012	9.50%	2.94%	6.56%
10/12/2012	9.60%	2.93%	6.67%
10/23/2012	9.75%	2.93%	6.82%
10/24/2012	10.30%	2.93%	7.37%
11/9/2012	10.30%	2.92%	7.38%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
11/28/2012	10.40%	2.90%	7.50%
11/29/2012	9.75%	2.89%	6.86%
11/29/2012	9.88%	2.89%	6.99%
12/5/2012	9.71%	2.89%	6.82%
12/5/2012	10.40%	2.89%	7.51%
12/12/2012	9.80%	2.88%	6.92%
12/13/2012	9.50%	2.88%	6.62%
12/13/2012	10.50%	2.88%	7.62%
12/14/2012	10.40%	2.88%	7.52%
12/19/2012	9.71%	2.87%	6.84%
12/19/2012	10.25%	2.87%	7.38%
12/20/2012	9.50%	2.87%	6.63%
12/20/2012	9.80%	2.87%	6.93%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.25%	2.87%	7.38%
12/20/2012	10.30%	2.87%	7.43%
12/20/2012	10.40%	2.87%	7.53%
12/20/2012	10.45%	2.87%	7.58%
12/21/2012	10.20%	2.87%	7.33%
12/26/2012	9.80%	2.86%	6.94%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/9/2013	9.70%	2.85%	6.85%
1/16/2013	9.60%	2.84%	6.76%
1/16/2013	9.60%	2.84%	6.76%
2/13/2013	10.20%	2.84%	7.36%
2/22/2013	9.75%	2.85%	6.90%
2/27/2013	10.00%	2.86%	7.14%
3/14/2013	9.30%	2.88%	6.42%
3/27/2013	9.80%	2.90%	6.90%
5/1/2013	9.84%	2.94%	6.90%
5/15/2013	10.30%	2.96%	7.34%
5/30/2013	10.20%	2.98%	7.22%
5/31/2013	9.00%	2.98%	6.02%
6/11/2013	10.00%	3.00%	7.00%
6/21/2013	9.75%	3.02%	6.73%
6/25/2013	9.80%	3.03%	6.77%
7/12/2013	9.36%	3.07%	6.29%
8/8/2013	9.83%	3.14%	6.69%
8/14/2013	9.15%	3.16%	5.99%
9/11/2013	10.20%	3.26%	6.94%
9/11/2013	10.25%	3.26%	6.99%
9/24/2013	10.20%	3.31%	6.89%
10/3/2013	9.65%	3.33%	6.32%
11/6/2013	10.20%	3.41%	6.79%
11/21/2013	10.00%	3.44%	6.56%
11/26/2013	10.00%	3.45%	6.55%
12/3/2013	10.25%	3.47%	6.78%
12/4/2013	9.50%	3.47%	6.03%
12/5/2013	10.20%	3.48%	6.72%
12/9/2013	8.72%	3.48%	5.24%
12/9/2013	9.75%	3.48%	6.27%
12/13/2013	9.75%	3.50%	6.25%
12/16/2013	9.95%	3.50%	6.45%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
12/16/2013	9.95%	3.50%	6.45%
12/16/2013	10.12%	3.50%	6.62%
12/17/2013	9.50%	3.51%	5.99%
12/17/2013	10.95%	3.51%	7.44%
12/18/2013	8.72%	3.51%	5.21%
12/18/2013	9.80%	3.51%	6.29%
12/19/2013	10.15%	3.51%	6.64%
12/30/2013	9.50%	3.54%	5.96%
2/20/2014	9.20%	3.68%	5.52%
2/26/2014	9.75%	3.69%	6.06%
3/17/2014	9.55%	3.72%	5.83%
3/26/2014	9.40%	3.73%	5.67%
3/26/2014	9.96%	3.73%	6.23%
4/2/2014	9.70%	3.73%	5.97%
5/16/2014	9.80%	3.70%	6.10%
5/30/2014	9.70%	3.68%	6.02%
6/6/2014	10.40%	3.67%	6.73%
6/30/2014	9.55%	3.64%	5.91%
7/2/2014	9.62%	3.64%	5.98%
7/10/2014	9.95%	3.63%	6.32%
7/23/2014	9.75%	3.61%	6.14%
7/29/2014	9.45%	3.60%	5.85%
7/31/2014	9.90%	3.60%	6.30%
8/20/2014	9.75%	3.57%	6.18%
8/25/2014	9.60%	3.56%	6.04%
8/29/2014	9.80%	3.54%	6.26%
9/11/2014	9.60%	3.51%	6.09%
9/15/2014	10.25%	3.51%	6.74%
10/9/2014	9.80%	3.45%	6.35%
11/6/2014	9.56%	3.37%	6.19%
11/6/2014	10.20%	3.37%	6.83%
11/14/2014	10.20%	3.35%	6.85%
11/26/2014	9.70%	3.33%	6.37%
11/26/2014	10.20%	3.33%	6.87%
12/4/2014	9.68%	3.31%	6.37%
12/10/2014	9.25%	3.29%	5.96%
12/10/2014	9.25%	3.29%	5.96%
12/11/2014	10.07%	3.29%	6.78%
12/12/2014	10.20%	3.28%	6.92%
12/17/2014	9.17%	3.27%	5.90%
12/18/2014	9.83%	3.26%	6.57%
1/23/2015	9.50%	3.14%	6.36%
2/24/2015	9.83%	3.04%	6.79%
3/18/2015	9.75%	2.98%	6.77%
3/25/2015	9.50%	2.96%	6.54%
3/26/2015	9.72%	2.95%	6.77%
4/23/2015	10.20%	2.87%	7.33%
4/29/2015	9.53%	2.86%	6.67%
5/1/2015	9.60%	2.85%	6.75%
5/26/2015	9.75%	2.83%	6.92%
6/17/2015	9.00%	2.82%	6.18%
6/17/2015	9.00%	2.82%	6.18%
9/2/2015	9.50%	2.79%	6.71%
9/10/2015	9.30%	2.79%	6.51%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
10/15/2015	9.00%	2.81%	6.19%
11/19/2015	10.00%	2.88%	7.12%
11/19/2015	10.30%	2.88%	7.42%
12/3/2015	10.00%	2.90%	7.10%
12/9/2015	9.14%	2.90%	6.24%
12/9/2015	9.14%	2.90%	6.24%
12/11/2015	10.30%	2.90%	7.40%
12/15/2015	9.60%	2.91%	6.69%
12/17/2015	9.70%	2.91%	6.79%
12/18/2015	9.50%	2.91%	6.59%
12/30/2015	9.50%	2.93%	6.57%
1/6/2016	9.50%	2.94%	6.56%
2/23/2016	9.75%	2.94%	6.81%
3/16/2016	9.85%	2.91%	6.94%
4/29/2016	9.80%	2.83%	6.97%
6/3/2016	9.75%	2.80%	6.95%
6/8/2016	9.48%	2.80%	6.68%
6/15/2016	9.00%	2.78%	6.22%
6/15/2016	9.00%	2.78%	6.22%
7/18/2016	9.98%	2.71%	7.27%
8/9/2016	9.85%	2.66%	7.19%
8/18/2016	9.50%	2.63%	6.87%
8/24/2016	9.75%	2.62%	7.13%
9/1/2016	9.50%	2.59%	6.91%
9/8/2016	10.00%	2.58%	7.42%
9/28/2016	9.58%	2.54%	7.04%
9/30/2016	9.90%	2.53%	7.37%
11/9/2016	9.80%	2.48%	7.32%
11/10/2016	9.50%	2.48%	7.02%
11/15/2016	9.55%	2.49%	7.06%
11/18/2016	10.00%	2.50%	7.50%
11/29/2016	10.55%	2.51%	8.04%
12/1/2016	10.00%	2.51%	7.49%
12/6/2016	8.64%	2.52%	6.12%
12/6/2016	8.64%	2.52%	6.12%
12/7/2016	10.10%	2.52%	7.58%
12/12/2016	9.60%	2.53%	7.07%
12/14/2016	9.10%	2.53%	6.57%
12/19/2016	9.00%	2.54%	6.46%
12/19/2016	9.37%	2.54%	6.83%
12/22/2016	9.60%	2.55%	7.05%
12/22/2016	9.90%	2.55%	7.35%
12/28/2016	9.50%	2.55%	6.95%
1/18/2017	9.45%	2.58%	6.87%
1/24/2017	9.00%	2.59%	6.41%
1/31/2017	10.10%	2.60%	7.50%
2/15/2017	9.60%	2.62%	6.98%
2/22/2017	9.60%	2.64%	6.96%
2/24/2017	9.75%	2.64%	7.11%
2/28/2017	10.10%	2.64%	7.46%
3/2/2017	9.41%	2.65%	6.76%
3/20/2017	9.50%	2.68%	6.82%
4/4/2017	10.25%	2.71%	7.54%
4/12/2017	9.40%	2.74%	6.66%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
4/20/2017	9.50%	2.76%	6.74%
5/3/2017	9.50%	2.79%	6.71%
5/11/2017	9.20%	2.81%	6.39%
5/18/2017	9.50%	2.83%	6.67%
5/23/2017	9.70%	2.84%	6.86%
6/16/2017	9.65%	2.89%	6.76%
6/22/2017	9.70%	2.90%	6.80%
6/22/2017	9.70%	2.90%	6.80%
7/24/2017	9.50%	2.95%	6.55%
8/15/2017	10.00%	2.97%	7.03%
9/22/2017	9.60%	2.93%	6.67%
9/28/2017	9.80%	2.92%	6.88%
10/20/2017	9.50%	2.91%	6.59%
10/26/2017	10.20%	2.91%	7.29%
10/26/2017	10.25%	2.91%	7.34%
10/26/2017	10.30%	2.91%	7.39%
11/6/2017	10.25%	2.90%	7.35%
11/15/2017	11.95%	2.89%	9.06%
11/30/2017	10.00%	2.88%	7.12%
11/30/2017	10.00%	2.88%	7.12%
12/5/2017	9.50%	2.88%	6.62%
12/6/2017	8.40%	2.87%	5.53%
12/6/2017	8.40%	2.87%	5.53%
12/7/2017	9.80%	2.87%	6.93%
12/14/2017	9.60%	2.86%	6.74%
12/14/2017	9.65%	2.86%	6.79%
12/18/2017	9.50%	2.86%	6.64%
12/20/2017	9.58%	2.86%	6.72%
12/21/2017	9.10%	2.85%	6.25%
12/28/2017	9.50%	2.85%	6.65%
12/29/2017	9.51%	2.85%	6.66%
1/18/2018	9.70%	2.84%	6.86%
1/31/2018	9.30%	2.84%	6.46%
2/2/2018	9.98%	2.84%	7.14%
2/23/2018	9.90%	2.85%	7.05%
3/12/2018	9.25%	2.86%	6.39%
3/15/2018	9.00%	2.87%	6.13%
3/29/2018	10.00%	2.88%	7.12%
4/12/2018	9.90%	2.89%	7.01%
4/13/2018	9.73%	2.89%	6.84%
4/18/2018	9.25%	2.89%	6.36%
4/18/2018	10.00%	2.89%	7.11%
4/26/2018	9.50%	2.90%	6.60%
5/30/2018	9.95%	2.94%	7.01%
5/31/2018	9.50%	2.94%	6.56%
6/14/2018	8.80%	2.96%	5.84%
6/22/2018	9.50%	2.97%	6.53%
6/22/2018	9.90%	2.97%	6.93%
6/28/2018	9.35%	2.97%	6.38%
6/29/2018	9.50%	2.97%	6.53%
8/8/2018	9.53%	2.99%	6.54%
8/21/2018	9.70%	3.00%	6.70%
8/24/2018	9.28%	3.01%	6.27%
9/5/2018	9.10%	3.02%	6.08%

Date of Electric Rate Case	Return on Equity	30-Year Treasury Yield	Risk Premium
9/14/2018	10.00%	3.03%	6.97%
9/20/2018	9.80%	3.04%	6.76%
9/26/2018	9.77%	3.05%	6.72%
9/26/2018	10.00%	3.05%	6.95%
9/27/2018	9.30%	3.05%	6.25%
10/4/2018	9.85%	3.06%	6.79%
10/29/2018	9.60%	3.10%	6.50%
10/31/2018	9.99%	3.11%	6.88%
11/1/2018	8.69%	3.11%	5.58%
12/4/2018	8.69%	3.14%	5.55%
12/13/2018	9.30%	3.14%	6.16%
12/14/2018	9.50%	3.14%	6.36%
12/19/2018	9.84%	3.14%	6.70%
12/20/2018	9.65%	3.14%	6.51%
12/21/2018	9.30%	3.14%	6.16%
1/9/2019	10.00%	3.14%	6.86%
# of Cases:			1,580
Average:			4.66%

Summary of Adjustment Clauses & Alternative Ratemaking Mechanisms

Adjustment Clauses									
Company	Parent	State	Fuel/ Purchased Power	Decoupling (F/P) [1]	New Capital Investment [2]	Energy Efficiency [3]	Renewables & RPS [4]	Environmental [5]	Other [6]
Ameren Illinois Company	AEE	Illinois	✓		✓	✓	✓	✓	✓
Union Electric Company	AEE	Missouri	✓	P		✓		✓	✓
Southwestern Electric Power Company	AEP	Arkansas	✓	P	✓	✓		✓	✓
Indiana Michigan Power Company	AEP	Indiana	✓	P	✓	✓	✓	✓	✓
Kentucky Power Company	AEP	Kentucky	✓	P	✓	✓		✓	✓
Southwestern Electric Power Company	AEP	Louisiana	✓	P	✓	✓		✓	✓
Indiana Michigan Power Company	AEP	Michigan	✓	P		✓	✓	✓	✓
Ohio Power Company	AEP	Ohio	✓	P	✓	✓	✓		✓
Public Service Company of Oklahoma	AEP	Oklahoma	✓	P		✓			✓
Kingsport Power Company	AEP	Tennessee	✓		✓				✓
AEP Texas Central Company	AEP	Texas	NA		✓	✓		✓	✓
AEP Texas North Company	AEP	Texas	NA		✓	✓			✓
Southwestern Electric Power Company	AEP	Texas			✓	✓	✓		✓
Appalachian Power Company	AEP	Virginia	✓		✓	✓	✓	✓	✓
Appalachian Power / Wheeling Power	AEP	West Virginia			✓	✓			✓
United Illuminating Company	AGR	Connecticut		F		✓	✓	✓	✓
Central Maine Power Company	AGR	Maine	✓	F					✓
New York State Electric & Gas Corporation	AGR	New York	✓	F		✓	✓		✓
Rochester Gas and Electric Corporation	AGR	New York	✓	F		✓	✓		✓
ALLETE (Minnesota Power)	ALE	Minnesota	✓			✓	✓	✓	✓
Superior Water, Light and Power Company	ALE	Wisconsin	✓						✓
Black Hills Colorado Electric Utility Company, LP	BKH	Colorado	✓		✓	✓	✓		✓
Black Hills Power, Inc.	BKH	South Dakota	✓	P	✓	✓		✓	✓
Black Hills Power, Inc.	BKH	Wyoming	✓						✓
Cheyenne Light, Fuel and Power Company	BKH	Wyoming	✓	P		✓			✓
Consumers Energy Company	CMS	Michigan	✓				✓		✓
DTE Electric Company	DTE	Michigan	✓			✓	✓	✓	✓
El Paso Electric Company	EE	New Mexico	✓						✓
El Paso Electric Company	EE	Texas	✓						✓
Kansas City Power & Light Company	EVRG	Kansas	✓			✓		✓	✓
Kansas City Power & Light Company	EVRG	Missouri	✓	P		✓		✓	✓
Kansas Gas and Electric Company	EVRG	Kansas	✓	P		✓		✓	✓
KCP&L Greater Missouri Operations Company	EVRG	Missouri	✓				✓	✓	✓
Westar Energy (KPL)	EVRG	Kansas	✓	P		✓		✓	✓
Hawaii Electric Light Company, Inc.	HE	Hawaii	✓	F	✓	✓	✓		✓
Hawaiian Electric Company, Inc.	HE	Hawaii	✓	F	✓	✓	✓		✓
Maui Electric Company	HE	Hawaii	✓	F	✓	✓	✓		✓
Interstate Power and Light Company	LNT	Iowa	✓			✓	✓	✓	✓
Wisconsin Power and Light Company	LNT	Wisconsin	✓						✓
Gulf Power Company	NEE	Florida	✓			✓		✓	✓
Florida Power & Light Company	NEE	Florida	✓						✓
NorthWestern Energy	NWE	Montana	✓			✓			✓
NorthWestern Energy	NWE	South Dakota	✓					✓	✓
Oklahoma Gas and Electric Company	OGE	Arkansas	✓	P	✓	✓		✓	✓
Oklahoma Gas and Electric Company	OGE	Oklahoma	✓	P		✓			✓
Otter Tail Power Company	OTTR	Minnesota	✓		✓	✓	✓	✓	✓
Otter Tail Power Company	OTTR	North Dakota	✓		✓	✓	✓		✓
Otter Tail Power Company	OTTR	South Dakota	✓		✓	✓		✓	✓
Public Service Company of New Mexico	PNM	New Mexico	✓			✓	✓		✓
Texas-New Mexico Power Company	PNM	Texas	NA		✓	✓			✓
Arizona Public Service Company	PNW	Arizona	✓	P		✓	✓	✓	✓
Portland General Electric Company	POR	Oregon	✓	P		✓	✓	✓	✓
Alabama Power Company	SO	Alabama	✓		✓			✓	✓
Georgia Power Company	SO	Georgia	✓		✓	✓		✓	✓
Mississippi Power Company	SO	Mississippi	✓	P	✓	✓	✓	✓	✓
Upper Michigan Energy Resources Corp	WEC	Michigan	✓			✓	✓		✓
Wisconsin Electric Power	WEC	Wisconsin	✓						✓
Wisconsin Public Service Company	WEC	Wisconsin	✓						✓
Public Service Company of Colorado	XEL	Colorado	✓		✓	✓	✓	✓	✓
Northern States Power Company - WI	XEL	Michigan	✓			✓			✓
Northern States Power Company - MN	XEL	Minnesota	✓	F	✓	✓	✓	✓	✓
Southwestern Public Service Company	XEL	New Mexico	✓		✓	✓	✓		✓
Northern States Power Company - MN	XEL	North Dakota	✓			✓	✓		✓
Northern States Power Company - MN	XEL	South Dakota	✓	P	✓	✓		✓	✓
Southwestern Public Service Company	XEL	Texas	✓		✓	✓			✓
Northern States Power Company - WI	XEL	Wisconsin	✓						✓
Duke Energy Carolinas	DUK	South Carolina	✓	P		✓	✓	✓	✓

Notes:

Texas electric T&D-only, do not have retail provider of last resort obligations, therefore fuel/power recovery is not applicable. A mechanism may cover one or more cost categories; therefore, designations may not indicate separate mechanisms for each category.

[1] Full or partial decoupling (such as Straight-Fixed Variable rate design, weather normalization clauses, and recovery of lost revenues as a result of Energy Efficiency programs).

[2] Includes recovery of costs related to targeted new generation projects, infrastructure replacement, system integrity/hardening, Smart Grid, AML metering, and other capital expenditures.

[3] Utility-sponsored conservation, energy efficiency, load control, or other demand side management programs.

[4] Recovers costs associated with renewable energy projects, Distributed Energy Resources, REC purchases, net metering, RPS expense, and renewable PPAs.

[5] EPA upgrade costs, emissions control & allowance purchase costs, nuclear/coal plant decommissioning, and other costs to comply with state and federal environmental mandates.

[6] Pension expenses, bad debt costs, storm costs, vegetation management, RTO/Transmission Expense, capacity costs, transmission costs, government & franchise fees and taxes, economic development, and low income programs.

[7] Source: Regulatory Research Associates Commission Profiles. Jurisdictions where future test years are allowed or historically granted to utilities in the jurisdiction. K = Historical test year with known and measurable changes included.

Proof Concept: Earnings, Dividends, Book Value and
Stock Price Growth Rate Equivalence in Constant Growth DCF

Line Description	IMPLIED GROWTH RATE AT ALLOWED ROE:	
Input	Dividend Yield	4.00% [1]
Assumes g = Allowed ROE - Div. Yield	Assumed Growth Rate	6.50%
Input	Total Return	10.50% [1]
Input	Payout Ratio	65.57% [2]
Input	Book Value/Share	20 [2]

		0	1	2	3	4	5	6	7	8	9	10	250
BV/S Escalates at Constant Growth g	Book Value/Share	\$ 20.00	\$ 21.30	\$ 22.68	\$ 24.16	\$ 25.73	\$ 27.40	\$ 29.18	\$ 31.08	\$ 33.10	\$ 35.25	\$ 37.54	\$ 137,540,924.55
Demonstrating Constant BV/S growth			6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Earnings based on ROE applied to BV/S	Earnings/share	\$ 2.10	\$ 2.24	\$ 2.38	\$ 2.54	\$ 2.70	\$ 2.88	\$ 3.06	\$ 3.26	\$ 3.48	\$ 3.70	\$ 3.94	\$ 14,441,797.08
Demonstrating Constant EPS growth			6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Demonstrating Constant Return Earned based on BV/S and EPS	Allowed ROE	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%
Div/S based on EPS and Constant Payout ratio	Dividends/Share	\$ 1.38	\$ 1.47	\$ 1.56	\$ 1.66	\$ 1.77	\$ 1.89	\$ 2.01	\$ 2.14	\$ 2.28	\$ 2.43	\$ 2.58	\$ 9,469,486.34
Demonstrating Constant Div/S growth			6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Retained Earnings based on difference between EPS and Div/S	Earnings retained to book value	\$ 0.72	\$ 0.77	\$ 0.82	\$ 0.87	\$ 0.93	\$ 0.99	\$ 1.06	\$ 1.12	\$ 1.20	\$ 1.27	\$ 1.36	\$ 4,972,310.73
Demonstrating Constant growth in Retained Earnings			6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
Demonstrating Constant Market/Book ratio	Market/Book Ratio	1.833	1.833	1.833	1.833	1.833	1.833	1.833	1.833	1.833	1.833	1.833	1.833
DCF calculation of market price = [Div/S]*[1+g]/[ROE-g]	Market Price	\$ 36.66	\$ 39.04	\$ 41.58	\$ 44.29	\$ 47.16	\$ 50.23	\$ 53.49	\$ 56.97	\$ 60.68	\$ 64.62	\$ 68.82	\$ 252,125,073.91
Demonstrating Price Appreciation equals Long Term Growth Rate	Price Appreciation	6.50%	OK	<= Price appreciation should equal long term growth rate									
Demonstrating Constant Price/Earnings Ratio	Price/Earnings	17.46	17.46	17.46	17.46	17.46	17.46	17.46	17.46	17.46	17.46	17.46	17.46
Present Value Factor calculated based upon the current period and the Constant ROE	Present Value Factor		0.9050	0.8190	0.7412	0.6707	0.6070	0.5493	0.4971	0.4499	0.4071	0.3684	0.00

CASE 1		DIVIDENDS IN PERPETUITY											
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period		Present Value Dividend	1.3271	1.2791	1.2328	1.1882	1.1451	1.1037	1.0637	1.0252	0.9881	0.9524	0.00
Total Value of investment sum of all Present Value Dividends in perpetuity (250 instances for demonstration purposes)		Value of Investment	\$ 36.66										

CASE 2	10-YEAR HOLDING PERIOD																				
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value of Dividend	\$	1.33	\$	1.28	\$	1.23	\$	1.19	\$	1.15	\$	1.10	\$	1.06	\$	1.03	\$	0.99	\$	0.95
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)	Present Value of Stock Price		--		--		--		--		--		--		--		--		--		25.36
Value of dividends = sum of all Present Value Dividends for periods 1-10	Value of Dividends	\$	11.31																		
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 10th Period (Terminal Value)	Value of Stock Price	\$	25.36																		
Total Value of investment sum of all Present Value Dividends for periods 1-10 and Present Value of Stock in period 10 (Terminal Value)	Value of Investment	\$	36.66																		

CASE 3	5-YEAR HOLDING PERIOD										
Present value of Div/S obtained by multiplying nominal Div/S by the Present Value Factor for the period	Present Value of Dividend	\$	1.33	\$	1.28	\$	1.23	\$	1.19	\$	1.15
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)	Present Value of Stock Price		--		--		--		--		30.49
Value of dividends = sum of all Present Value Dividends for periods 1-5	Value of Dividends	\$	6.17								
Present value of Stock Price obtained by multiplying nominal Stock Price by the Present Value Factor for the 5th Period (Terminal Value)	Value of Stock Price	\$	30.49								
Total Value of investment sum of all Present Value Dividends for periods 1-5 and Present Value of Stock in period 5 (Terminal Value)	Value of Investment	\$	36.66								

[1] Note, for purposes of this exhibit, these data are illustrative only.

[2] Note: Illustrative only.

Growth Rate Regression Analysis

Company	Ticker	Trailing P/E Ratio	Proj. Earnings Growth Rate	Proj. Dividend Growth Rate	Proj. Book Value Growth Rate	Proj. BxR Retention Growth
ALLETE, Inc.	ALE	29.10	3.50%	4.50%	3.50%	3.06%
Alliant Energy Corporation	LNT	20.70	6.50%	6.00%	5.00%	3.78%
Ameren Corporation	AEE	20.40	7.50%	5.50%	4.50%	4.31%
American Electric Power Company, Inc.	AEP	19.80	4.50%	6.00%	4.00%	3.85%
Avangrid, Inc.	AGR	29.00	12.00%	5.50%	1.50%	2.15%
Avista Corporation	AVA	20.90	5.50%	4.00%	3.00%	2.98%
Black Hills Corporation	BKH	18.10	6.50%	6.00%	6.00%	4.30%
CenterPoint Energy, Inc.	CNP	28.30	3.50%	2.00%	5.50%	2.13%
CMS Energy Corporation	CMS	21.40	7.00%	7.00%	7.00%	5.74%
Consolidated Edison, Inc.	ED	18.10	3.00%	3.50%	3.50%	2.72%
Dominion Energy Inc.	D	21.70	6.50%	7.00%	8.00%	2.08%
DTE Energy Company	DTE	19.40	7.50%	6.50%	5.50%	4.51%
Duke Energy Corporation	DUK	20.20	5.50%	4.00%	2.00%	1.96%
Edison International	EIX	12.70	4.50%	5.50%	4.00%	6.13%
El Paso Electric Company	EE	18.70	3.00%	7.00%	3.50%	2.98%
Entergy Corporation	ETR	17.00	1.00%	2.00%	3.00%	4.18%
Exelon Corporation	EXC	22.70	7.50%	5.00%	5.50%	5.32%
FirstEnergy Corp.	FE	32.50	6.50%	4.00%	1.50%	7.88%
Eergy, Inc.	EVRG	NMF	NMF	NMF	NMF	3.33%
Hawaiian Electric Industries, Inc.	HE	19.70	3.50%	2.00%	4.00%	3.61%
IDACORP, Inc.	IDA	19.80	4.50%	6.50%	4.50%	4.09%
MGE Energy, Inc.	MGEE	27.20	7.50%	5.00%	9.50%	4.68%
NextEra Energy, Inc.	NEE	26.20	9.00%	10.50%	7.00%	5.27%
Eversource Energy	ES	21.20	5.50%	6.00%	4.00%	3.52%
NorthWestern Corporation	NWE	18.30	2.50%	4.50%	3.50%	2.88%
OGE Energy Corp.	OGE	18.70	6.00%	8.00%	4.00%	3.34%
Otter Tail Corporation	OTTR	21.70	9.00%	3.50%	7.50%	4.95%
Pinnacle West Capital Corporation	PNW	18.40	6.00%	6.00%	4.00%	3.99%
PNM Resources, Inc.	PNM	20.50	7.50%	7.00%	4.00%	4.75%
Portland General Electric Company	POR	18.10	4.00%	6.00%	3.50%	3.24%
PPL Corporation	PPL	12.00	3.00%	2.50%	5.50%	4.86%
Public Service Enterprise Group Incorporated	PEG	19.20	4.50%	5.00%	4.50%	5.06%
Sempra Energy	SRE	20.80	9.50%	8.50%	5.00%	4.56%
Southern Company	SO	14.50	3.50%	3.00%	3.00%	3.51%
Vectren Corporation	VVC	27.30	5.50%	6.50%	5.50%	3.96%
WEC Energy Group, Inc.	WEC	21.50	7.00%	6.00%	3.50%	4.20%
Xcel Energy Inc.	XEL	20.20	5.50%	5.50%	4.50%	3.89%

Notes:

Source: Value Line Reports as of February 15, 2019.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.432927161
R Square	0.187425927
Adjusted R Square	0.163526689
Standard Error	4.075650377
Observations	36

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	130.2685161	130.2685161	7.842339198	0.008356513
Residual	34	564.7714839	16.610926		
Total	35	695.04			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	16.16423189	1.855602679	8.711041473	3.52793E-10	12.39319354	19.93527025
Proj. Earnings	84.92080578	30.32433565	2.800417683	0.008356513	23.29434115	146.5472704

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.110557603
R Square	0.012222984
Adjusted R Square	-0.016829282
Standard Error	4.493605056
Observations	36

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	8.495462565	8.495462565	0.420723946	0.520933278
Residual	34	686.5445374	20.1924864		
Total	35	695.04			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	19.5899344	2.299297366	8.519965573	5.95546E-10	14.91719996	24.26266885
Proj. Dividends	26.30174169	40.54953631	0.648632366	0.520933278	-56.10483084	108.7083142

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.071194061
R Square	0.005068594
Adjusted R Square	-0.024194094
Standard Error	4.509849105
Observations	36

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	3.522875817	3.522875817	0.17321014	0.679889973
Residual	34	691.5171242	20.33873895		
Total	35	695.04			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	20.16884532	2.133843642	9.451885283	4.84219E-11	15.83235329	24.50533734
Proj. Book Value	18.30065359	43.97237716	0.416185223	0.679889973	-71.06196846	107.6632756

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.048916167
R Square	0.002392791
Adjusted R Square	-0.026948597
Standard Error	4.515909505
Observations	36

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.663085733	1.663085733	0.08155004	0.776940316
Residual	34	693.3769143	20.39343865		
Total	35	695.04			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	20.28942538	2.599610515	7.80479432	4.39818E-09	15.00638119	25.57246958
Proj. BxR	17.72067909	62.0537844	0.285569676	0.776940316	-108.3877835	143.8291417

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.457151286
R Square	0.208987298
Adjusted R Square	0.106921143
Standard Error	4.211296131
Observations	36

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	145.2545319	36.31363298	2.047567075	0.11197938
Residual	31	549.7854681	17.7350151		
Total	35	695.04			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	17.92208428	3.177585488	5.640158021	3.42734E-06	11.44135595	24.4028126
Proj. Earnings	104.2385539	37.78556536	2.758687157	0.009648484	27.17438524	181.3027225
Proj. Dividend	-37.69021727	45.31833344	-0.831677037	0.411952039	-130.1175677	54.73713315
Proj. Book Value	-5.960809219	43.56079296	-0.136838859	0.892043022	-94.8036322	82.88201376
Proj. BxR	-14.1290755	59.82357891	-0.236179041	0.814847292	-136.1400691	107.8819181

Retention Ratio Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.45650
R Square	0.20839
Adjusted R Square	0.20592
Standard Error	0.26707
Observations	323

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	6.02706	6.02706	84.50246	0.00000
Residual	321	22.89501	0.07132		
Total	322	28.92207			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.169	0.016	10.402	0.000	0.137	0.201
Retention Ratio	-0.236	0.026	-9.193	0.000	-0.286	-0.185

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS
				Growth
2004	ALE	22.22%	77.78%	13.03%
2005	ALE	50.40%	49.60%	-0.53%
2006	ALE	52.35%	47.65%	1.33%
2007	ALE	53.25%	46.75%	-1.44%
2008	ALE	60.99%	39.01%	0.64%
2009	ALE	93.12%	6.88%	9.29%
2010	ALE	80.37%	19.63%	9.42%
2011	ALE	67.17%	32.83%	3.80%
2012	ALE	71.32%	28.68%	4.27%
1996	LNT	86.78%	13.22%	6.92%
1997	LNT	105.26%	-5.26%	-0.07%
1998	LNT	158.73%	-58.73%	13.28%
1999	LNT	91.32%	8.68%	2.08%
2000	LNT	80.97%	19.03%	3.42%
2001	LNT	82.64%	17.36%	2.46%
2002	LNT	169.49%	-69.49%	18.83%
2003	LNT	63.69%	36.31%	11.10%
2004	LNT	55.14%	44.86%	2.50%
2005	LNT	47.51%	52.49%	7.55%
2006	LNT	55.83%	44.17%	8.91%
2007	LNT	47.21%	52.79%	4.97%
2008	LNT	55.12%	44.88%	7.73%
2009	LNT	78.95%	21.05%	13.86%
2010	LNT	57.45%	42.55%	4.34%
2011	LNT	61.82%	38.18%	3.86%
2012	LNT	59.02%	40.98%	5.80%
1996	AEE	87.76%	12.24%	4.29%
1997	AEE	104.10%	-4.10%	2.83%
1998	AEE	90.07%	9.93%	3.32%
1999	AEE	90.39%	9.61%	1.35%
2000	AEE	76.28%	23.72%	-0.15%
2001	AEE	74.49%	25.51%	-3.63%
2002	AEE	95.49%	4.51%	3.17%
2003	AEE	80.89%	19.11%	-1.11%
2004	AEE	90.07%	9.93%	0.24%
2005	AEE	81.15%	18.85%	-2.03%
2006	AEE	95.49%	4.51%	-1.20%
2007	AEE	85.23%	14.77%	-4.09%
2008	AEE	88.19%	11.81%	-5.99%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS
				Growth
2009	AEE	55.40%	44.60%	-2.44%
2010	AEE	55.60%	44.40%	-2.53%
2011	AEE	63.16%	36.84%	2.15%
2012	AEE	66.39%	33.61%	3.31%
1996	AEP	76.43%	23.57%	27.79%
1997	AEP	73.17%	26.83%	24.39%
1998	AEP	85.41%	14.59%	24.95%
1999	AEP	89.22%	10.78%	26.43%
2000	AEP	230.77%	-130.77%	38.93%
2001	AEP	73.39%	26.61%	-2.29%
2002	AEP	83.92%	16.08%	0.22%
2003	AEP	65.22%	34.78%	3.44%
2004	AEP	53.64%	46.36%	2.67%
2005	AEP	53.79%	46.21%	-0.05%
2006	AEP	52.45%	47.55%	2.36%
2007	AEP	55.24%	44.76%	1.40%
2008	AEP	54.85%	45.15%	1.84%
2009	AEP	55.22%	44.78%	2.98%
2010	AEP	65.77%	34.23%	6.96%
2011	AEP	59.11%	40.89%	6.45%
2012	AEP	63.09%	36.91%	4.53%
1996	BKH	65.71%	34.29%	20.76%
1997	BKH	63.76%	36.24%	13.10%
1998	BKH	62.50%	37.50%	7.41%
1999	BKH	61.18%	38.82%	5.08%
2000	BKH	45.57%	54.43%	1.45%
2001	BKH	32.75%	67.25%	-6.47%
2002	BKH	49.79%	50.21%	4.16%
2003	BKH	65.22%	34.78%	-10.29%
2004	BKH	71.26%	28.74%	228.58%
2005	BKH	60.66%	39.34%	218.63%
2006	BKH	59.73%	40.27%	209.85%
2007	BKH	51.12%	48.88%	224.61%
2008	BKH	777.78%	-677.78%	249.76%
2009	BKH	61.21%	38.79%	14.13%
2010	BKH	86.75%	13.25%	19.41%
2011	BKH	144.55%	-44.55%	25.82%
2012	BKH	75.13%	24.87%	12.52%
1996	CMS	41.63%	58.37%	-8.29%
2007	CMS	31.25%	68.75%	25.07%
2008	CMS	29.27%	70.73%	8.33%
2009	CMS	53.76%	46.24%	14.17%
2010	CMS	49.62%	50.38%	7.30%
2011	CMS	57.93%	42.07%	6.44%
2012	CMS	62.75%	37.25%	7.26%
1996	ED	70.99%	29.01%	2.28%
1997	ED	71.19%	28.81%	1.64%
1998	ED	69.74%	30.26%	-0.88%
1999	ED	68.37%	31.63%	-5.08%
2000	ED	79.56%	20.44%	3.19%
2001	ED	68.54%	31.46%	-0.51%
2002	ED	70.93%	29.07%	3.58%
2003	ED	79.15%	20.85%	4.81%
2004	ED	97.41%	2.59%	7.10%
2005	ED	76.25%	23.75%	3.43%
2006	ED	77.97%	22.03%	4.27%
2007	ED	66.67%	33.33%	2.30%
2008	ED	69.64%	30.36%	3.36%
2009	ED	75.16%	24.84%	3.09%
2010	ED	68.59%	31.41%	3.36%
2011	ED	67.23%	32.77%	2.24%
2012	ED	62.69%	37.31%	-3.65%
1996	DTE	73.57%	26.43%	-3.62%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS
				Growth
1997	DTE	71.53%	28.47%	11.43%
1998	DTE	67.54%	32.46%	5.14%
1999	DTE	61.86%	38.14%	1.19%
2000	DTE	63.00%	37.00%	7.20%
2001	DTE	95.81%	4.19%	9.04%
2002	DTE	53.79%	46.21%	-4.88%
2003	DTE	72.28%	27.72%	0.77%
2004	DTE	80.78%	19.22%	6.61%
2005	DTE	63.00%	37.00%	4.05%
2006	DTE	84.90%	15.10%	8.69%
2007	DTE	79.70%	20.30%	8.12%
2008	DTE	77.66%	22.34%	6.97%
2009	DTE	65.43%	34.57%	10.37%
2010	DTE	58.29%	41.71%	4.69%
2011	DTE	63.22%	36.78%	6.82%
2012	DTE	62.37%	37.63%	9.40%
2007	DUK	71.67%	28.33%	1.45%
2008	DUK	89.11%	10.89%	6.07%
2009	DUK	83.19%	16.81%	4.45%
2010	DUK	72.39%	27.61%	0.58%
2011	DUK	71.74%	28.26%	-1.92%
2012	DUK	81.67%	18.33%	2.91%
2011	EE	26.61%	73.39%	-0.24%
2012	EE	42.92%	57.08%	1.79%
2001	ES	32.85%	67.15%	-7.65%
2002	ES	53.00%	47.00%	16.53%
2003	ES	46.77%	53.23%	15.13%
2004	ES	69.23%	30.77%	20.99%
2005	ES	69.39%	30.61%	21.44%
2006	ES	89.02%	10.98%	25.85%
2007	ES	49.06%	50.94%	4.09%
2008	ES	44.62%	55.38%	7.05%
2009	ES	49.74%	50.26%	7.23%
2010	ES	49.05%	50.95%	6.64%
2011	ES	49.55%	50.45%	6.94%
2012	ES	69.84%	30.16%	10.93%
1996	HE	93.08%	6.92%	4.99%
1997	HE	88.41%	11.59%	4.01%
1998	HE	83.78%	16.22%	2.06%
1999	HE	85.52%	14.48%	-0.31%
2000	HE	97.64%	2.36%	3.64%
2001	HE	77.50%	22.50%	-3.34%
2002	HE	76.54%	23.46%	-6.90%
2003	HE	78.48%	21.52%	-7.12%
2004	HE	91.18%	8.82%	-7.33%
2005	HE	84.93%	15.07%	-2.21%
2006	HE	93.23%	6.77%	3.38%
2007	HE	111.71%	-11.71%	9.88%
2008	HE	115.89%	-15.89%	10.00%
2009	HE	136.26%	-36.26%	13.24%
2010	HE	102.48%	-2.48%	4.94%
2011	HE	86.11%	13.89%	11.67%
2012	HE	74.25%	25.75%	2.80%
1996	NEE	55.26%	44.74%	6.82%
1997	NEE	53.78%	46.22%	2.78%
1998	NEE	51.95%	48.05%	5.54%
1999	NEE	51.11%	48.89%	4.52%
2000	NEE	52.17%	47.83%	3.03%
2001	NEE	48.48%	51.52%	8.56%
2002	NEE	57.71%	42.29%	11.41%
2003	NEE	49.08%	50.92%	11.97%
2004	NEE	52.85%	47.15%	11.36%
2005	NEE	61.21%	38.79%	16.37%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS
				Growth
2006	NEE	46.44%	53.56%	8.87%
2007	NEE	50.15%	49.85%	7.54%
2008	NEE	43.73%	56.27%	3.83%
2009	NEE	47.61%	52.39%	7.51%
2010	NEE	42.19%	57.81%	5.27%
2011	NEE	45.64%	54.36%	4.01%
2012	NEE	52.63%	47.37%	7.58%
2005	NWE	58.48%	41.52%	5.90%
2006	NWE	94.66%	5.34%	14.23%
2007	NWE	88.89%	11.11%	10.11%
2008	NWE	74.58%	25.42%	7.29%
2009	NWE	66.34%	33.66%	8.78%
2010	NWE	63.55%	36.45%	6.99%
2011	NWE	56.92%	43.08%	6.72%
2012	NWE	65.49%	34.51%	8.56%
1996	OGE	82.72%	17.28%	-2.52%
1997	OGE	82.72%	17.28%	-0.37%
1998	OGE	65.69%	34.31%	-1.39%
1999	OGE	69.07%	30.93%	0.05%
2000	OGE	70.53%	29.47%	1.14%
2001	OGE	103.08%	-3.08%	14.19%
2002	OGE	93.06%	6.94%	13.50%
2003	OGE	77.01%	22.99%	8.28%
2004	OGE	75.28%	24.72%	9.10%
2005	OGE	72.83%	27.17%	10.98%
2006	OGE	54.47%	45.53%	7.31%
2007	OGE	51.52%	48.48%	6.54%
2008	OGE	56.00%	44.00%	9.27%
2009	OGE	53.38%	46.62%	8.41%
2010	OGE	48.67%	51.33%	2.92%
2011	OGE	43.93%	56.07%	-0.15%
2012	OGE	44.69%	55.31%	1.88%
1996	OTTR	72.58%	27.42%	6.36%
1997	OTTR	72.09%	27.91%	6.86%
1998	OTTR	74.42%	25.58%	3.73%
1999	OTTR	68.28%	31.72%	1.12%
2000	OTTR	63.75%	36.25%	2.78%
2001	OTTR	61.90%	38.10%	0.77%
2002	OTTR	59.22%	40.78%	0.53%
2003	OTTR	71.52%	28.48%	-4.10%
2004	OTTR	73.33%	26.67%	-10.94%
2005	OTTR	62.92%	37.08%	-23.97%
2006	OTTR	68.05%	31.95%	-19.27%
2007	OTTR	65.73%	34.27%	6.33%
2008	OTTR	109.17%	-9.17%	20.18%
2009	OTTR	167.61%	-67.61%	29.78%
2010	OTTR	313.16%	-213.16%	39.20%
2011	OTTR	264.44%	-164.44%	36.03%
2012	OTTR	113.33%	-13.33%	12.61%
1996	PNW	41.70%	58.30%	8.36%
1997	PNW	40.94%	59.06%	-0.24%
1998	PNW	43.16%	56.84%	-0.97%
1999	PNW	41.82%	58.18%	-2.81%
2000	PNW	42.69%	57.31%	-6.52%
2001	PNW	41.58%	58.42%	-0.18%
2002	PNW	64.43%	35.57%	4.74%
2003	PNW	68.65%	31.35%	-0.86%
2004	PNW	70.93%	29.07%	-0.01%
2005	PNW	86.16%	13.84%	9.88%
2006	PNW	64.04%	35.96%	0.99%
2007	PNW	70.95%	29.05%	5.73%
2008	PNW	99.06%	0.94%	12.32%
2009	PNW	92.92%	7.08%	10.56%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS
				Growth
2010	PNW	68.18%	31.82%	5.20%
2011	PNW	70.23%	29.77%	5.94%
2012	PNW	76.29%	23.71%	4.96%
1996	PNM	20.87%	79.13%	20.65%
1997	PNM	33.60%	66.40%	7.11%
1998	PNM	34.00%	66.00%	4.60%
1999	PNM	41.09%	58.91%	12.27%
2000	PNM	34.19%	65.81%	10.06%
2001	PNM	20.31%	79.69%	-1.57%
2002	PNM	53.27%	46.73%	-0.93%
2003	PNM	53.04%	46.96%	-19.53%
2004	PNM	44.06%	55.94%	61.06%
2005	PNM	50.64%	49.36%	69.24%
2006	PNM	50.00%	50.00%	72.01%
2007	PNM	119.74%	-19.74%	87.44%
2008	PNM	554.55%	-454.55%	106.07%
2009	PNM	86.21%	13.79%	21.18%
2010	PNM	57.47%	42.53%	11.59%
2011	PNM	46.30%	53.70%	6.50%
2012	PNM	44.27%	55.73%	8.54%
2006	POR	59.65%	40.35%	20.49%
2007	POR	39.91%	60.09%	-1.20%
2008	POR	69.78%	30.22%	5.80%
2009	POR	77.10%	22.90%	11.58%
2010	POR	62.65%	37.35%	4.95%
2011	POR	54.36%	45.64%	2.63%
2012	POR	57.75%	42.25%	4.66%
1996	PEG	87.80%	12.20%	8.71%
1997	PEG	89.63%	10.37%	9.44%
1998	PEG	77.42%	22.58%	2.57%
1999	PEG	69.23%	30.77%	0.07%
2000	PEG	60.85%	39.15%	0.87%
2001	PEG	58.38%	41.62%	0.69%
2002	PEG	57.45%	42.55%	8.37%
2003	PEG	70.59%	29.41%	14.49%
2004	PEG	72.37%	27.63%	15.86%
2005	PEG	62.57%	37.43%	12.24%
2006	PEG	61.62%	38.38%	11.83%
2007	PEG	45.17%	54.83%	-0.48%
2008	PEG	44.48%	55.52%	-2.79%
2009	PEG	43.18%	56.82%	0.38%
2010	PEG	44.63%	55.37%	2.52%
2011	PEG	44.05%	55.95%	-0.59%
2012	PEG	58.20%	41.80%	3.64%
1996	SO	75.00%	25.00%	-0.15%
1997	SO	82.28%	17.72%	4.02%
1998	SO	77.46%	22.54%	3.42%
1999	SO	73.22%	26.78%	3.18%
2000	SO	66.67%	33.33%	1.89%
2001	SO	83.23%	16.77%	5.59%
2002	SO	73.51%	26.49%	4.32%
2003	SO	70.56%	29.44%	2.76%
2004	SO	68.93%	31.07%	2.47%
2005	SO	69.48%	30.52%	2.14%
2006	SO	73.33%	26.67%	4.03%
2007	SO	70.18%	29.82%	3.26%
2008	SO	73.78%	26.22%	3.74%
2009	SO	74.57%	25.43%	3.64%
2010	SO	76.27%	23.73%	3.80%
2011	SO	73.33%	26.67%	2.12%
2012	SO	72.66%	27.34%	3.86%
1996	WEC	76.65%	23.35%	34.94%
1997	WEC	285.19%	-185.19%	54.68%

Date	Ticker	Payout Ratio	Retention Ratio	5-year Fwd EPS
				Growth
1998	WEC	94.55%	5.45%	13.05%
1999	WEC	82.98%	17.02%	6.72%
2000	WEC	126.85%	-26.85%	22.76%
2001	WEC	43.48%	56.52%	9.31%
2002	WEC	34.48%	65.52%	5.61%
2003	WEC	35.40%	64.60%	7.54%
2004	WEC	45.16%	54.84%	12.13%
2005	WEC	34.38%	65.63%	8.60%
2006	WEC	34.85%	65.15%	10.68%
2007	WEC	35.21%	64.79%	10.73%
2008	WEC	35.53%	64.47%	10.68%
2009	WEC	42.50%	57.50%	10.27%
2010	WEC	41.67%	58.33%	4.34%
2011	WEC	47.71%	52.29%	6.93%
2012	WEC	51.06%	48.94%	6.58%
1996	XEL	71.73%	28.27%	6.01%
1997	XEL	86.96%	13.04%	-7.15%
1998	XEL	77.72%	22.28%	28.57%
1999	XEL	101.40%	-1.40%	33.67%
2000	XEL	92.50%	7.50%	30.19%
2001	XEL	66.08%	33.92%	24.32%
2002	XEL	269.05%	-169.05%	40.62%
2003	XEL	60.98%	39.02%	3.68%
2004	XEL	63.78%	36.22%	3.44%
2005	XEL	70.83%	29.17%	5.48%
2006	XEL	65.19%	34.81%	5.03%
2007	XEL	67.41%	32.59%	6.54%
2008	XEL	64.38%	35.62%	5.56%
2009	XEL	65.10%	34.90%	6.41%
2010	XEL	64.10%	35.90%	6.16%
2011	XEL	59.88%	40.12%	5.15%
2012	XEL	57.84%	42.16%	4.46%

Ticker	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
AILETE, Inc.	Earnings Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.35	2.48	2.77	3.08	2.82	1.89	2.19	2.65	2.58	2.63	2.90	3.38	3.14	3.13
	Dividends Per Share	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.46	1.71	1.46	1.46	1.71	1.46	1.71	1.46	1.71	1.46	1.71	1.46	1.71	1.46
	Payoff Ratio	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.22%	50.40%	52.35%	53.25%	60.99%	93.12%	80.87%	67.17%	71.32%	72.24%	67.59%	59.67%	66.24%	68.32%
	Annual Earnings Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83.70%	11.28%	11.19%	8.44%	-32.98%	15.87%	17.81%	21.00%	21.24%	1.94%	10.27%	15.95%	-7.10%	-0.37%
	Sr Avg Fwd EPS Growth	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.00%	13.33%	13.33%	13.33%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%	9.25%
Alliant Energy Corporation	Earnings Per Share	1.14	1.06	0.63	1.10	0.24	0.59	0.79	0.83	1.11	1.03	1.35	1.27	0.95	1.38	1.38	1.53	1.63	1.74	1.69	1.65	1.69
	Dividends Per Share	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
	Payoff Ratio	86.70%	100%	158.73%	91.32%	109.72%	82.64%	109.40%	63.90%	55.14%	47.51%	55.83%	47.11%	55.12%	78.95%	57.45%	61.82%	59.02%	56.97%	58.62%	65.09%	71.52%
	Annual Earnings Growth	N/A	-16.30%	-33.68%	73.81%	12.79%	-2.02%	-51.24%	33.06%	17.83%	19.46%	67.91%	30.58%	-5.58%	-25.20%	44.74%	0.00%	10.91%	8.20%	5.45%	-2.87%	-2.37%
	Sr Avg Fwd EPS Growth	6.92%	-9.07%	-25.63%	3.41%	11.68%	-11.10%	-3.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
Ammco Corporation	Earnings Per Share	2.58	2.44	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54
	Dividends Per Share	2.51	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54	2.54
	Payoff Ratio	87.70%	104.10%	70.36%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%	74.65%
	Annual Earnings Growth	N/A	-14.69%	15.57%	-0.35%	18.51%	2.40%	-21.99%	18.05%	-10.15%	10.99%	15.00%	12.03%	-33.68%	-3.47%	-0.36%	1.83%	-2.43%	-12.86%	14.29%	-0.83%	12.61%
	Sr Avg Fwd EPS Growth	4.20%	2.83%	3.32%	1.35%	-0.15%	-3.63%	3.17%	1.11%	0.24%	-2.03%	-1.20%	-4.00%	-5.99%	-2.44%	-2.53%	2.19%	3.31%	N/A	N/A	N/A	N/A
American Electric Power, Inc.	Earnings Per Share	2.10	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
	Dividends Per Share	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
	Payoff Ratio	73.13%	69.25%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%	73.13%
	Annual Earnings Growth	N/A	4.46%	-14.33%																		

Retention Growth Estimate Vs. Value Line EPS Growth Estimate

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]
Company	Ticker	Projected Earnings per share 2018	Projected Dividend per share 2018	Retention Ratio (B)	Projected Book Value per Share 2018	Return on Book Value (R)	B x R	Projected Common Shares Outstanding 2018	Projected Common Shares Outstanding 2021-2023	Common Shares Growth Rate	2018 High Price	2018 Low Price	2018 price midpoint	Projected Book Value per Share 2019	Market/ Book Ratio	"S"	"V"	S x V	BR + SV	2018-19 Value Line Projected EPS Growth	Sustainable Growth Minus EPS Growth	2017 EPS
ALLETE, Inc.	ALE	3.35	2.24	33.13%	41.65	8.04%	2.67%	51.50	53.50	1.27%	\$ 82.80	\$ 66.60	\$ 74.70	42.80	1.75	2.21%	42.70%	0.94%	3.61%	7.03%	-3.42%	3.13
Alliant Energy Corporation	LNT	2.15	1.34	37.67%	20.20	10.64%	4.01%	236.00	245.00	1.24%	\$ 46.60	\$ 36.80	\$ 41.70	21.05	1.98	2.46%	49.52%	1.22%	5.23%	8.04%	-2.81%	1.99
Ameren Corporation	AEE	3.35	1.85	44.78%	31.30	10.70%	4.79%	244.00	250.00	0.80%	\$ 70.90	\$ 51.90	\$ 61.40	32.85	1.87	1.50%	46.50%	0.70%	5.49%	20.94%	-15.45%	2.77
American Electric Power Company, Inc.	AEP	3.90	2.53	35.13%	38.65	10.09%	3.54%	493.50	515.00	1.42%	\$ 79.30	\$ 62.70	\$ 71.00	40.10	1.77	2.51%	43.52%	1.09%	4.64%	7.73%	-3.10%	3.62
Avangrid, Inc.	AGR	2.20	1.74	20.91%	49.25	4.47%	0.93%	309.00	309.00	0.00%	\$ 54.60	\$ 45.20	\$ 49.90	50.00	1.00	0.00%	-0.20%	0.00%	0.93%	31.74%	-30.80%	1.67
Black Hills Corporation	BKH	3.40	1.93	43.24%	35.60	9.55%	4.13%	60.00	61.00	0.55%	\$ 68.20	\$ 50.50	\$ 59.35	37.35	1.59	0.87%	37.07%	0.32%	4.45%	0.59%	3.86%	3.38
CMS Energy Corporation	CMS	2.35	1.43	39.15%	16.95	13.86%	5.43%	284.00	294.00	1.15%	\$ 53.30	\$ 40.50	\$ 46.90	18.20	2.58	2.96%	61.19%	1.81%	7.24%	8.29%	-1.06%	2.17
Consolidated Edison, Inc.	ED	4.80	2.86	40.42%	52.70	9.11%	3.68%	327.00	332.00	0.50%	\$ 84.90	\$ 71.10	\$ 78.00	54.00	1.44	0.73%	30.77%	0.22%	3.90%	17.07%	-13.17%	4.10
DTE Energy Company	DTE	6.15	3.59	41.63%	56.20	10.94%	4.56%	182.00	195.00	2.30%	\$ 121.00	\$ 94.30	\$ 107.65	60.45	1.78	4.10%	43.85%	1.80%	6.35%	7.33%	-0.98%	5.73
Duke Energy Corporation	DUK	4.45	3.64	18.20%	60.40	7.37%	1.34%	727.00	750.00	1.03%	\$ 91.40	\$ 72.00	\$ 81.70	61.70	1.32	1.37%	24.48%	0.33%	1.68%	5.45%	-3.77%	4.22
El Paso Electric	EE	2.30	1.42	38.26%	29.05	7.92%	3.03%	40.60	41.00	0.32%	\$ 64.40	\$ 48.10	\$ 56.25	29.95	1.88	0.61%	46.76%	0.28%	3.31%	-4.96%	8.27%	2.42
Eversource Energy	EVERG	2.50	1.74	30.40%	34.90	7.16%	2.18%	257.00	212.00	-6.15%	\$ 61.10	\$ 50.90	\$ 56.00	36.35	1.54	-9.48%	35.09%	-3.33%	-1.15%	N/A	N/A	N/A
Eversource Energy	ES	3.25	2.02	37.85%	36.25	8.97%	3.39%	316.89	316.89	0.00%	\$ 70.50	\$ 52.80	\$ 61.65	37.55	1.64	0.00%	39.09%	0.00%	3.39%	4.50%	-1.11%	3.11
Hawaiian Electric Industries, Inc.	HE	1.90	1.24	34.74%	19.95	9.52%	3.31%	108.80	113.00	1.26%	\$ 39.30	\$ 31.70	\$ 35.50	20.80	1.71	2.15%	41.41%	0.89%	4.20%	15.85%	-11.66%	1.64
NextEra Energy, Inc.	NEE	6.68	4.44	33.53%	68.30	9.78%	3.28%	500.00	535.00	2.26%	\$ 184.20	\$ 145.10	\$ 164.65	69.85	2.36	5.32%	57.58%	3.06%	6.34%	2.77%	3.57%	6.50
NorthWestern Corporation	NWE	3.40	2.20	35.29%	38.10	8.92%	3.15%	50.35	51.00	0.42%	\$ 65.70	\$ 50.00	\$ 57.85	39.20	1.48	0.63%	32.24%	0.20%	3.35%	1.80%	1.56%	3.34
OGE Energy Corp.	OGE	2.10	1.40	33.33%	20.00	10.50%	3.50%	199.70	199.70	0.00%	\$ 40.50	\$ 29.60	\$ 35.05	20.60	1.70	0.00%	41.23%	0.00%	3.50%	9.38%	-5.88%	1.92
Otter Tail Corporation	OTTR	2.15	1.34	37.67%	18.75	11.47%	4.32%	40.00	44.00	3.20%	\$ 49.80	\$ 39.00	\$ 44.40	20.50	2.17	6.92%	53.63%	3.73%	8.05%	15.59%	-7.55%	1.86
Pinnacle West Capital Corporation	PNW	4.40	2.87	34.77%	46.20	9.52%	3.31%	112.25	114.25	0.58%	\$ 92.60	\$ 73.40	\$ 83.00	47.80	1.74	1.01%	42.41%	0.43%	3.74%	-0.68%	4.42%	4.43
PNM Resources, Inc.	PNM	1.95	1.09	44.10%	21.45	9.09%	4.01%	79.65	83.00	1.37%	\$ 45.30	\$ 33.80	\$ 39.55	22.30	1.77	2.43%	43.62%	1.06%	5.07%	1.56%	3.51%	1.92
Portland General Electric Company	POR	2.40	1.43	40.42%	28.05	8.56%	3.46%	89.25	90.00	0.28%	\$ 50.40	\$ 39.00	\$ 44.70	29.00	1.54	0.43%	35.12%	0.15%	3.61%	4.80%	-1.20%	2.29
Public Service Enterprise Group Incorporated	PEG	3.00	1.80	40.00%	28.65	10.47%	4.19%	505.00	505.00	0.00%	\$ 56.70	\$ 46.20	\$ 51.45	30.00	1.72	0.00%	41.69%	0.00%	4.19%	6.38%	-2.19%	2.82
Southern Company	SO	2.90	2.38	17.93%	24.35	11.91%	2.14%	1040.00	1090.00	1.56%	\$ 49.40	\$ 42.40	\$ 45.90	25.20	1.82	2.84%	45.10%	1.28%	3.42%	-9.66%	13.08%	3.21
WEC Energy Group, Inc.	WEC	3.35	2.21	34.03%	30.95	10.82%	3.68%	315.50	315.50	0.00%	\$ 74.20	\$ 58.50	\$ 66.35	31.95	2.08	0.00%	51.85%	0.00%	3.68%	6.69%	-3.00%	3.14
Xcel Energy Inc.	XEL	2.45	1.52	37.96%	23.85	10.27%	3.90%	516.50	533.00	1.04%	\$ 54.10	\$ 41.50	\$ 47.80	24.95	1.92	2.00%	47.80%	0.96%	4.85%	6.52%	-1.67%	2.30
Average:				35.38%																		
																			Mean:	4.12%	-2.94%	
																			Median:	3.90%	-1.93%	

Notes:

- [1] Source: Value Line
[2] Source: Value Line
[3] Equals 1 - [2] / [1]
[4] Source: Value Line
[5] Equals [1] / [4]
[6] Equals [3] x [5]
[7] Source: Value Line
[8] Source: Value Line
[9] Equals ([8] / [7]) ^ 0.33 - 1
[10] Source: Value Line
[11] Source: Value Line
[12] Equals Average ([10], [11])
[13] Source: Value Line
[14] Equals [12] / [13]
[15] Equals [9] x [14]
[16] Equals 1 - (1 / [14])
[17] Equals [15] x [16]
[18] Equals [6] + [17]
[19] Equals ([1] - [21]) / [21]
[20] Equals 18 - 19
[21] Source: Value Line

Number of underestimates: 17
Number of overestimates: 7

Notes:	Number of underestimates	Number of overestimates
[1] Source: Value Line		
[2] Source: Value Line		
[3] Equals 1 - [2] / [1]		
[4] Source: Value Line		
[5] Equals [1] / [4]		
[6] Equals [3] x [5]		
[7] Source: Value Line		
[8] Source: Value Line		
[9] Equals ([8] / [7]) ^ 0.33 - 1		
[10] Source: Value Line		
[11] Source: Value Line		
[12] Equals Average ([10], [11])		
[13] Source: Value Line		
[14] Equals [12] / [13]		
[15] Equals [9] x [14]		
[16] Equals 1 - ([1] / [14])		
[17] Equals [15] x [16]		
[18] Equals [6] + [17]		
[19] Source: Value Line, Rebuttal Exhibit No. RBH-X, page		
[20] Equals ([1] / [2018 Projected Earnings per share]) ^ (1 / 3) - 1		
[21] Equals [20] - [21]		

Equity Duration Calculation

Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Average Growth	Mean ROE	Equity Duration
American Electric Power Company, Inc.	AEP	\$2.68	\$76.56	3.50%	3.66%	4.60%	8.26%	29.36
Consolidated Edison	ED	\$2.86	\$78.81	3.63%	3.73%	2.80%	6.53%	28.40
DTE Energy	DTE	\$3.78	\$114.11	3.31%	3.48%	5.20%	8.68%	30.89
Duke Energy Co.	DUK	\$3.71	\$86.12	4.31%	4.42%	2.60%	7.02%	24.17
Eversource Energy	ES	\$2.02	\$66.05	3.06%	3.21%	5.10%	8.31%	33.22
NextEra Energy Inc.	NEE	\$4.44	\$174.49	2.54%	2.72%	6.90%	9.62%	38.98
Public Service Enterprise Group	PEG	\$1.80	\$52.78	3.41%	3.58%	5.00%	8.58%	30.08
WEC Energy Group	WEC	\$2.21	\$70.97	3.11%	3.29%	5.50%	8.79%	32.68
Xcel Energy Inc.	XEL	\$1.52	\$50.78	2.99%	3.14%	5.00%	8.14%	33.86

Source: Exhibit DCP-2, Schedule 8

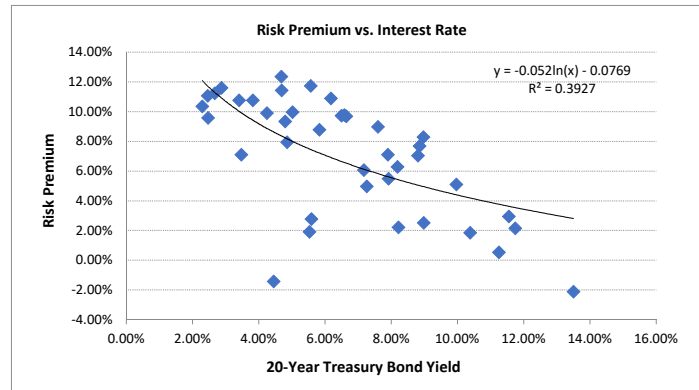
Average Equity Duration 31.29

Equity Duration Calculation	Price	D(0)	Growth Rate	Period	1	2	3	4	200
AEP Stated Price	\$ 76.56	2.68	4.60%	Dividend	\$ 2.74	\$ 2.87	\$ 3.00	\$ 3.14	\$ 21,125.92
AEP Implied Price	\$ 74.80			PV Factor	0.9236890	0.8532014	0.7880927	0.7279526	0.0000001
AEP Equity Duration	29.36			PV Wtgd Cash Flow	0.0338573	0.0327122	0.0316058	0.0305369	0.0000360
ED Stated Price	\$ 78.81	2.86	2.80%	Dividend	\$ 2.90	\$ 2.98	\$ 3.06	\$ 3.15	\$ 706.37
ED Implied Price	\$ 77.67			PV Factor	0.9386975	0.8811530	0.8271361	0.7764306	0.0000032
ED Equity Duration	28.40			PV Wtgd Cash Flow	0.0350481	0.0338207	0.0326364	0.0314935	0.0000291
DTE Stated Price	\$ 114.11	3.78	5.20%	Dividend	\$ 3.88	\$ 4.08	\$ 4.29	\$ 4.52	\$ 93,276.32
DTE Implied Price	\$ 111.12			PV Factor	0.9200915	0.8465683	0.7789202	0.7166779	0.0000001
DTE Equity Duration	30.89			PV Wtgd Cash Flow	0.0321128	0.0310831	0.0300865	0.0291218	0.0000490
DUK Stated Price	\$ 86.12	3.71	2.60%	Dividend	\$ 3.76	\$ 3.86	\$ 3.96	\$ 4.06	\$ 621.31
DUK Implied Price	\$ 85.01			PV Factor	0.9344052	0.8731131	0.8158415	0.7623265	0.0000013
DUK Equity Duration	24.17			PV Wtgd Cash Flow	0.0413096	0.0396035	0.0379679	0.0363998	0.0000094
ES Stated Price	\$ 66.05	2.02	5.10%	Dividend	\$ 2.07	\$ 2.18	\$ 2.29	\$ 2.40	\$ 41,231.35
ES Implied Price	\$ 64.29			PV Factor	0.9232395	0.8523711	0.7869426	0.7265365	0.0000001
ES Equity Duration	33.22			PV Wtgd Cash Flow	0.0297495	0.0288666	0.0280100	0.0271788	0.0000741
NEE Stated Price	\$ 174.49	4.44	6.90%	Dividend	\$ 4.59	\$ 4.91	\$ 5.25	\$ 5.61	\$ 2,683,346.78
NEE Implied Price	\$ 167.72			PV Factor	0.9122412	0.8321840	0.7591525	0.6925302	0.0000000
NEE Equity Duration	38.98			PV Wtgd Cash Flow	0.0249824	0.0243625	0.0237580	0.0231685	0.0001683
PEG Stated Price	\$ 52.78	1.80	5.00%	Dividend	\$ 1.85	\$ 1.94	\$ 2.03	\$ 2.14	\$ 30,385.53
PEG Implied Price	\$ 51.46			PV Factor	0.9209723	0.8481899	0.7811594	0.7194262	0.0000001
PEG Equity Duration	30.08			PV Wtgd Cash Flow	0.0330209	0.0319319	0.0308788	0.0298604	0.0000417
WEC Stated Price	\$ 70.97	2.21	5.50%	Dividend	\$ 2.27	\$ 2.40	\$ 2.53	\$ 2.67	\$ 96,252.84
WEC Implied Price	\$ 68.97			PV Factor	0.9192422	0.8450062	0.7767653	0.7140354	0.0000000
WEC Equity Duration	32.68			PV Wtgd Cash Flow	0.0302672	0.0293532	0.0284667	0.0276070	0.0000677
XEL Stated Price	\$ 50.78	1.52	5.00%	Dividend	\$ 1.56	\$ 1.64	\$ 1.72	\$ 1.80	\$ 25,658.90
XEL Implied Price	\$ 49.43			PV Factor	0.9247018	0.8550734	0.7906880	0.7311506	0.0000002
XEL Equity Duration	33.86			PV Wtgd Cash Flow	0.0291454	0.0282984	0.0274759	0.0266774	0.0000823

Market Risk Premium Regression Based on Mr. Parcel's Data

Year	[1] EPS	[2] BVPS	[3] ROE	[4] 20-Year	[5] Risk Premium	[6] Logged
1977		\$79.07				
1978	\$12.33	\$85.35	15.00%	7.90%	7.10%	-253.83%
1979	\$14.86	\$94.27	16.55%	8.86%	7.69%	-242.36%
1980	\$14.82	\$102.48	15.06%	9.97%	5.09%	-230.56%
1981	\$15.36	\$109.43	14.50%	11.55%	2.95%	-215.85%
1982	\$12.64	\$112.46	11.39%	13.50%	-2.11%	-200.25%
1983	\$14.03	\$116.93	12.23%	10.38%	1.85%	-226.53%
1984	\$16.64	\$122.47	13.90%	11.74%	2.16%	-214.22%
1985	\$14.61	\$125.20	11.80%	11.25%	0.55%	-218.48%
1986	\$14.48	\$126.82	11.49%	8.98%	2.51%	-241.02%
1987	\$17.50	\$134.04	13.42%	7.92%	5.50%	-253.58%
1988	\$23.75	\$141.32	17.25%	8.97%	8.28%	-241.13%
1989	\$22.87	\$147.26	15.85%	8.81%	7.04%	-242.93%
1990	\$21.73	\$153.01	14.47%	8.19%	6.28%	-250.23%
1991	\$16.29	\$158.85	10.45%	8.22%	2.23%	-249.86%
1992	\$18.86	\$149.74	12.22%	7.26%	4.96%	-262.28%
1993	\$21.89	\$180.88	13.24%	7.17%	6.07%	-263.53%
1994	\$30.60	\$193.06	16.37%	6.59%	9.78%	-271.96%
1995	\$33.96	\$216.51	16.58%	7.60%	8.98%	-257.70%
1996	\$38.73	\$237.08	17.08%	6.18%	10.90%	-278.39%
1997	\$39.72	\$249.52	16.33%	6.64%	9.69%	-271.21%
1998	\$37.71	\$266.40	14.62%	5.83%	8.79%	-284.22%
1999	\$48.17	\$290.68	17.29%	5.57%	11.72%	-288.78%
2000	\$50.00	\$325.80	16.22%	6.50%	9.72%	-273.34%
2001	\$24.70	\$338.37	7.44%	5.53%	1.91%	-289.50%
2002	\$27.59	\$321.72	8.36%	5.59%	2.77%	-288.42%
2003	\$48.73	\$367.17	14.15%	4.80%	9.35%	-303.66%
2004	\$58.55	\$414.75	14.98%	5.02%	9.96%	-299.17%
2005	\$69.93	\$453.06	16.12%	4.69%	11.43%	-305.97%
2006	\$81.51	\$504.39	17.03%	4.68%	12.35%	-306.19%
2007	\$66.17	\$529.59	12.80%	4.86%	7.94%	-302.41%
2008	\$14.88	\$451.37	3.03%	4.45%	-1.42%	-311.23%
2009	\$50.97	\$513.58	10.56%	3.47%	7.09%	-336.10%
2010	\$77.35	\$579.14	14.16%	4.25%	9.91%	-315.83%
2011	\$86.95	\$613.14	14.59%	3.82%	10.77%	-326.49%
2012	\$86.51	\$666.97	13.52%	2.46%	11.06%	-370.50%
2013	\$100.20	\$715.84	14.49%	2.88%	11.61%	-354.74%
2014	\$102.31	\$726.96	14.18%	3.41%	10.77%	-337.85%
2015	\$88.43	\$740.29	12.05%	2.47%	9.58%	-370.10%
2016	\$95.48	\$768.98	12.65%	2.30%	10.35%	-377.23%
2017	\$110.98	\$826.52	13.91%	2.67%	11.24%	-362.31%
Average			13.68%	6.57%	7.11%	

Market Risk Premium Regression Based on Mr. Parcell's Data



SUMMARY OUTPUT - Semi-Log Regression

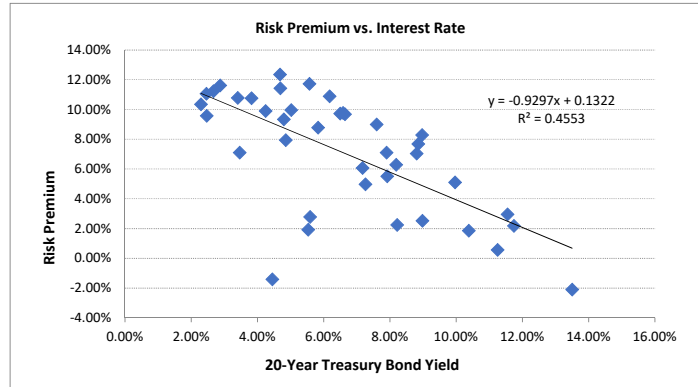
Regression Statistics	
Multiple R	0.62662412
R Square	0.39265779
Adjusted R Square	0.3766751
Standard Error	0.03102668
Observations	40

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	0.023650204	0.023650204	24.5676911	1.52035E-05
Residual	38	0.03658088	0.000962655		
Total	39	0.060231085			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.07687891	0.030255023	-2.541029482	0.01525726	-0.138126998	-0.015630813
Logged Treasury Yield Bond	-0.05242817	0.010577487	-4.95658058	1.5203E-05	-0.073841171	-0.031015164

	[7]	[8]	[9]	[10]
	Risk-Free Rate	Risk Premium	Beta	ROE
Parcell Proxy Group [11]	3.05%	10.62%	0.54	8.83%
Hevert Updated Proxy Group [12]	3.05%	10.62%	0.60	9.42%

Market Risk Premium Regression Based on Mr. Parcell's Data



SUMMARY OUTPUT - Linear Regression

Regression Statistics						
Multiple R	0.67479597					
R Square	0.4553496					
Adjusted R Square	0.4410167					
Standard Error	0.02938174					
Observations	40					

ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	0.027426201	0.027426201	31.7695261	1.79508E-06	
Residual	38	0.032804884	0.000863286			
Total	39	0.060231085				

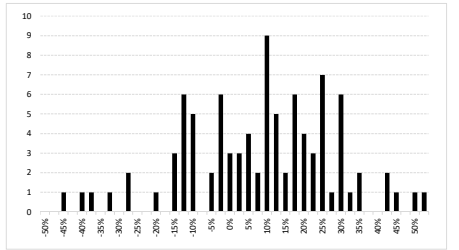
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.13220918	0.011795511	11.20843226	1.3059E-13	0.10833042	0.156087947
Treasury Bond Yield	-0.92969409	0.164943309	-5.63644623	1.7951E-06	-1.263604361	-0.595783819

	[13]	[14]	[15]	[16]
	Risk-Free Rate	Risk Premium	Beta	ROE
Parcell Proxy Group [17]	3.05%	10.39%	0.54	8.70%
Hevert Updated Proxy Group [18]	3.05%	10.39%	0.60	9.29%

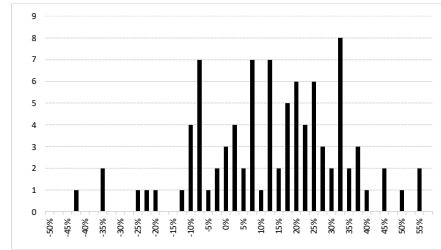
NOTES

- [1] Source: Direct Testimony of David C. Parcell, Schedule 9
 [2] Source: Direct Testimony of David C. Parcell, Schedule 9
 [3] Source: Direct Testimony of David C. Parcell, Schedule 9
 [4] Source: Direct Testimony of David C. Parcell, Schedule 9
 [5] Equals Col. [3] - Col. [4]
 [6] Equals Ln (Col. [5])
 [7] Source: Direct Testimony of David C. Parcell, Schedule 10, 3-month average yield on 20-year Treasury Bonds for November 2018 - January 2019
 [8] Equals $-0.076879 + (-0.052428 \times \text{Ln}(\text{Col. [7]}))$
 [9] Sources: Direct Testimony of David C. Parcell, Schedule 10, Rebuttal Exhibit No. RBH-4
 [10] Col. [7] + (Col. [9] x Col. [8])
 [11] Source: Direct Testimony of David C. Parcell, Schedule 10, average Beta for Parcell Proxy Group
 [12] Source: Direct Testimony of David C. Parcell, Schedule 10, average Beta for Hevert Updated Proxy Group
 [13] See note [7]
 [14] Equals $0.132209 + (-0.929694 \times \text{Col. [13]})$
 [15] See note [9]
 [16] Col. [13] + (Col. [15] x Col. [14])
 [17] See note [11]
 [18] See note [12]

Frequency Distribution of Market Risk Premium, 1926 - 2017



Frequency Distribution of Market Returns, 1926 - 2017



Source: Duff & Phelps, 2018 SBBi Yearbook at Appendix A-1, A-7

Market Risk Premium, 1926 - 2017

Large Company Stocks Total Returns		Long-Term Government Bond Income Returns		MRP
Year	Jan-Dec*	Jan-Dec*		
1926	0.1162	0.0373		7.89%
1927	0.3749	0.0341		34.08%
1928	0.4361	0.0322		40.39%
1929	-0.0842	0.0347		-11.89%
1930	-0.2490	0.0332		-28.22%
1931	-0.4334	0.0333		-46.67%
1932	-0.0819	0.0369		-11.88%
1933	0.5399	0.0312		50.87%
1934	-0.0144	0.0318		-4.62%
1935	0.4767	0.0281		44.86%
1936	0.3392	0.0277		31.15%
1937	-0.3503	0.0266		-37.69%
1938	0.3112	0.0264		28.48%
1939	-0.0041	0.0240		-2.81%
1940	-0.0978	0.0223		-12.01%
1941	-0.1159	0.0194		-13.53%
1942	0.2034	0.0246		17.88%
1943	0.2590	0.0244		23.46%
1944	0.1975	0.0246		17.29%
1945	0.3644	0.0234		34.10%
1946	-0.0807	0.0204		-10.11%
1947	0.0571	0.0213		3.58%
1948	0.0550	0.0240		3.10%
1949	0.1879	0.0225		16.54%
1950	0.3171	0.0212		29.59%
1951	0.2402	0.0238		21.64%
1952	0.1837	0.0266		15.71%
1953	-0.0099	0.0284		-3.83%
1954	0.5262	0.0279		49.83%
1955	0.3156	0.0275		28.81%
1956	0.0656	0.0299		3.57%
1957	-0.1078	0.0344		-14.22%
1958	0.4336	0.0327		40.09%
1959	0.1196	0.0401		7.95%
1960	0.0047	0.0426		-3.79%
1961	0.2689	0.0383		23.06%
1962	-0.0873	0.0400		-12.73%
1963	0.2280	0.0389		18.91%
1964	0.1648	0.0415		12.33%
1965	0.1245	0.0420		8.25%
1966	-0.1006	0.0449		-14.55%
1967	0.2398	0.0459		19.39%
1968	0.1106	0.0550		5.56%
1969	-0.0850	0.0595		-14.45%
1970	0.0386	0.0674		-2.88%
1971	0.1840	0.0632		7.98%
1972	0.1899	0.0587		13.12%
1973	-0.1469	0.0651		-21.20%
1974	-0.2647	0.0727		-33.74%
1975	0.3723	0.0799		29.24%
1976	0.2393	0.0789		16.04%
1977	-0.0716	0.0714		-14.30%
1978	0.0657	0.0790		-1.33%
1979	0.1861	0.0886		9.75%
1980	0.3250	0.0997		22.53%
1981	-0.0492	0.1155		-16.47%
1982	0.2155	0.1350		8.05%
1983	0.2256	0.1038		12.18%
1984	0.0627	0.1174		-5.47%
1985	0.3173	0.1125		20.48%
1986	0.1867	0.0898		9.69%
1987	0.0525	0.0792		-2.67%
1988	0.1661	0.0897		7.64%
1989	0.3169	0.0881		22.88%
1990	-0.0310	0.0819		-11.29%
1991	0.3047	0.0822		22.25%
1992	0.0762	0.0726		0.36%
1993	0.1008	0.0717		2.91%
1994	0.0132	0.0659		-5.27%
1995	0.3758	0.0760		29.98%
1996	0.2296	0.0618		16.78%
1997	0.3336	0.0684		26.72%
1998	0.2858	0.0583		22.75%
1999	0.2104	0.0557		15.47%
2000	-0.0910	0.0650		-15.60%
2001	-0.1189	0.0553		-17.42%
2002	-0.2210	0.0559		-27.69%
2003	0.2868	0.0480		23.88%
2004	0.1088	0.0502		5.86%
2005	0.0491	0.0469		0.22%
2006	0.1579	0.0468		11.11%
2007	0.0549	0.0486		0.63%
2008	-0.3700	0.0445		-41.45%
2009	0.2646	0.0347		22.99%
2010	0.1506	0.0425		10.81%
2011	0.0211	0.0390		-1.79%
2012	0.1600	0.0246		13.54%
2013	0.3239	0.0288		29.51%
2014	0.1369	0.0341		10.28%
2015	0.0138	0.0247		-1.09%
2016	0.1196	0.0230		9.66%
2017	0.2183	0.0267		19.16%
Average	0.1206	0.0499		7.07%
Std. Dev.	0.1980	0.0263		

Market Risk Premium

Bin	Frequency	Cumulative %
-50.00%	0	0.00%
-47.50%	0	0.00%
-45.00%	1	1.09%
-42.50%	0	1.09%
-40.00%	1	2.17%
-37.50%	1	3.26%
-35.00%	0	3.26%
-32.50%	1	4.35%
-30.00%	0	4.35%
-27.50%	2	6.52%
-25.00%	0	6.52%
-22.50%	0	6.52%
-20.00%	1	7.61%
-17.50%	0	7.61%
-15.00%	3	10.87%
-12.50%	6	17.39%
-10.00%	5	22.83%
-7.50%	0	22.83%
-5.00%	2	25.00%
-2.50%	6	31.52%
0.00%	3	34.78%
2.50%	3	38.04%
5.00%	4	42.39%
7.50%	2	44.57%
10.00%	9	54.35%
12.50%	5	59.78%
15.00%	2	61.96%
17.50%	6	68.48%
20.00%	4	72.83%
22.50%	3	76.09%
25.00%	7	83.70%
27.50%	1	84.78%
30.00%	6	91.30%
32.50%	1	92.39%
35.00%	2	94.57%
37.50%	0	94.57%
40.00%	0	94.57%
42.50%	2	96.74%
45.00%	1	97.83%
47.50%	0	97.83%
50.00%	1	98.91%
51.00%	1	100.00%
Count:	92	

Hevert	Direct MRP	Rank
12.10%		57.90%
13.52%		61.20%

Market Return

Bin	Frequency	Cumulative %
-50.00%	0	0.00%
-47.50%	0	0.00%
-45.00%	0	0.00%
-42.50%	1	1.09%
-40.00%	0	1.09%
-37.50%	0	1.09%
-35.00%	2	3.26%
-32.50%	0	3.26%
-30.00%	0	3.26%
-27.50%	0	3.26%
-25.00%	1	4.35%
-22.50%	1	5.43%
-20.00%	1	6.52%
-17.50%	0	6.52%
-15.00%	0	6.52%
-12.50%	1	7.61%
-10.00%	4	11.96%
-7.50%	7	19.57%
-5.00%	1	20.65%
-2.50%	2	22.83%
0.00%	3	26.09%
2.50%	4	30.43%
5.00%	2	32.61%
7.50%	7	40.22%
10.00%	1	41.30%
12.50%	7	48.91%
15.00%	2	51.09%
17.50%	5	56.52%
20.00%	6	63.04%
22.50%	4	67.39%
25.00%	6	73.91%
27.50%	3	77.17%
30.00%	2	79.35%
32.50%	8	88.04%
35.00%	2	90.22%
37.50%	3	93.48%
40.00%	1	94.57%
42.50%	0	94.57%
45.00%	2	96.74%
47.50%	0	96.74%
50.00%	1	97.83%
52.50%	0	97.83%
55.00%	2	100.00%
57.50%	0	100.00%
Count:	92	

Direct Market Return		
Hevert	% Rank	Occurrence
15.29%	51.90%	44
16.71%	56.10%	40
Average:	54.00%	

Market-to-Book Regression Analysis
Mr. Parcell's Proxy Group

Market to Book Ratio	Implied ROE
100%	2.94%
115%	4.80%
125%	6.04%
151%	9.27%
163.06%	10.75%
111%	4.30%

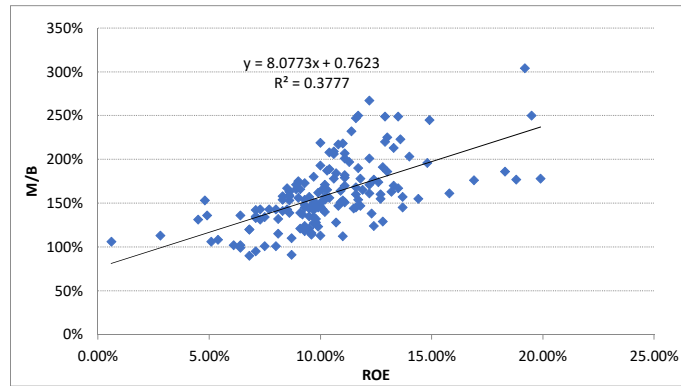
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.614570423
R Square	0.377696805
Adjusted R Square	0.373575591
Standard Error	0.303544391
Observations	153

ANOVA

	df	SS	MS	F	Significance F
Regression	1	8.444280525	8.44428052	91.6469945	2.92251E-17
Residual	151	13.91301882	0.0921392		
Total	152	22.35729935			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.762315093	0.090648675	8.40955579	2.8734E-14	0.583211538	0.941418649
ROE	8.077337634	0.843740942	9.57324368	2.9225E-17	6.41027519	9.744400079



Market-to-Book Regression Analysis			
Mr. Parcell's Proxy Group			
Company	Year	ROE	M/B
AEP	2002	12.30%	138%
AEP	2003	12.40%	124%
AEP	2004	12.70%	155%
AEP	2005	11.90%	165%
AEP	2006	12.20%	161%
AEP	2007	11.70%	190%
AEP	2008	11.60%	145%
AEP	2009	11.00%	112%
AEP	2010	9.30%	118%
AEP	2011	10.70%	128%
AEP	2012	9.70%	134%
AEP	2013	9.90%	145%
AEP	2014	9.90%	162%
AEP	2015	10.10%	166%
AEP	2016	11.80%	178%
AEP	2017	10.00%	193%
AEP	2018	10.30%	187%
ED	2002	11.50%	144%
ED	2003	10.00%	146%
ED	2004	8.00%	143%
ED	2005	10.20%	154%
ED	2006	9.70%	149%
ED	2007	10.90%	151%
ED	2008	9.90%	123%
ED	2009	8.70%	110%
ED	2010	9.30%	124%
ED	2011	9.30%	145%
ED	2012	9.70%	150%
ED	2013	9.50%	144%
ED	2014	8.50%	143%
ED	2015	9.30%	148%
ED	2016	8.60%	159%
ED	2017	8.50%	167%
ED	2018	8.30%	154%
DTE	2002	13.70%	145%
DTE	2003	9.70%	142%
DTE	2004	8.10%	132%
DTE	2005	10.20%	140%
DTE	2006	7.50%	134%
DTE	2007	7.70%	143%
DTE	2008	7.50%	101%
DTE	2009	8.70%	91%
DTE	2010	9.60%	116%
DTE	2011	9.10%	121%
DTE	2012	9.20%	137%
DTE	2013	8.60%	153%
DTE	2014	11.10%	170%
DTE	2015	9.30%	173%
DTE	2016	9.70%	180%
DTE	2017	11.10%	207%
DTE	2018	11.30%	197%
DUK	2002	8.90%	171%
DUK	2003	0.60%	106%
DUK	2004	8.60%	139%
DUK	2005	9.50%	157%
DUK	2006	4.80%	153%
DUK	2007	6.40%	102%
DUK	2008	6.10%	102%
DUK	2009	6.80%	90%
DUK	2010	8.00%	101%
DUK	2011	8.10%	115%
DUK	2012	6.80%	120%
DUK	2013	6.80%	120%
DUK	2014	7.10%	133%
DUK	2015	7.10%	135%
DUK	2016	6.40%	136%
DUK	2017	7.10%	142%
DUK	2018	7.30%	131%
ES	2002	6.40%	99%
ES	2003	7.10%	95%
ES	2004	5.10%	106%
ES	2005	5.40%	108%
ES	2006	4.50%	131%
ES	2007	8.60%	163%
ES	2008	9.80%	128%
ES	2009	9.60%	114%
ES	2010	4.90%	136%
ES	2011	10.00%	150%
ES	2012	7.30%	143%
ES	2013	8.30%	141%

Market-to-Book Regression Analysis			
Mr. Parcell's Proxy Group			
Company	Year	ROE	M/B
ES	2014	8.30%	158%
ES	2015	8.60%	158%
ES	2016	8.90%	166%
ES	2017	9.00%	175%
ES	2018	9.10%	166%
NEE	2002	11.60%	160%
NEE	2003	13.50%	167%
NEE	2004	12.60%	174%
NEE	2005	11.10%	201%
NEE	2006	14.00%	203%
NEE	2007	12.90%	249%
NEE	2008	14.80%	196%
NEE	2009	13.30%	170%
NEE	2010	14.40%	155%
NEE	2011	13.70%	157%
NEE	2012	12.40%	177%
NEE	2013	12.20%	201%
NEE	2014	13.00%	225%
NEE	2015	12.90%	220%
NEE	2016	11.40%	232%
NEE	2017	11.60%	247%
NEE	2018	11.70%	250%
PEG	2002	19.90%	178%
PEG	2003	18.30%	186%
PEG	2004	12.80%	191%
PEG	2005	14.90%	245%
PEG	2006	12.20%	267%
PEG	2007	19.20%	304%
PEG	2008	19.50%	250%
PEG	2009	18.80%	177%
PEG	2010	16.90%	176%
PEG	2011	15.80%	161%
PEG	2012	11.70%	154%
PEG	2013	11.10%	151%
PEG	2014	12.70%	160%
PEG	2015	13.20%	163%
PEG	2016	10.90%	164%
PEG	2017	10.60%	178%
PEG	2018	10.70%	184%
WEC	2002	12.80%	129%
WEC	2003	11.80%	147%
WEC	2004	9.00%	156%
WEC	2005	11.60%	168%
WEC	2006	11.10%	182%
WEC	2007	11.10%	179%
WEC	2008	11.00%	153%
WEC	2009	10.80%	147%
WEC	2010	12.20%	171%
WEC	2011	13.00%	186%
WEC	2012	13.30%	213%
WEC	2013	13.60%	223%
WEC	2014	13.50%	249%
WEC	2015	10.00%	219%
WEC	2016	10.60%	209%
WEC	2017	10.80%	217%
WEC	2018	11.00%	218%
XEL	2002	2.80%	113%
XEL	2003	10.00%	113%
XEL	2004	9.80%	132%
XEL	2005	9.10%	139%
XEL	2006	9.80%	150%
XEL	2007	9.30%	154%
XEL	2008	9.70%	127%
XEL	2009	9.50%	121%
XEL	2010	9.50%	135%
XEL	2011	10.10%	143%
XEL	2012	10.40%	156%
XEL	2013	10.20%	157%
XEL	2014	10.30%	165%
XEL	2015	10.20%	171%
XEL	2016	10.40%	189%
XEL	2017	10.40%	208%
XEL	2018	10.60%	206%

Source: Direct Testimony of David C. Parcell, Exhibit DCP-2, Schedule 11

Recently Authorized ROEs by RRA Ranking

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	RRA Rank	Vertically Integrated		
								Top Tier (Average/1 and higher)	Middle Tier (Average/2)	Bottom Tier (Average/3 and lower)
Washington	Avista Corp.	D-UE-150204	Electric	Vertically Integrated	1/6/2016	9.50	Average / 3			9.50
Arkansas	Entergy Arkansas Inc.	D-15-015-U	Electric	Vertically Integrated	2/23/2016	9.75	Average / 1	9.75		
Indiana	Indianapolis Power & Light Co.	Ca-44576	Electric	Vertically Integrated	3/16/2016	9.85	Average / 1	9.85		
New Mexico	El Paso Electric Co.	C-15-00127-UT	Electric	Vertically Integrated	6/8/2016	9.48	Below Average / 2			9.48
Indiana	Northern IN Public Svc Co.	Ca-44688	Electric	Vertically Integrated	7/18/2016	9.98	Average / 1	9.98		
Tennessee	Kingsport Power Company	D-16-00001	Electric	Vertically Integrated	8/9/2016	9.85	Above Average / 3	9.85		
Arizona	UNS Electric Inc.	D-E-04204A-15-0142	Electric	Vertically Integrated	8/18/2016	9.50	Average / 3			9.50
Washington	PacifiCorp	D-UE-152253	Electric	Vertically Integrated	9/1/2016	9.50	Average / 3			9.50
Michigan	Upper Peninsula Power Co.	C-U-17895	Electric	Vertically Integrated	9/8/2016	10.00	Above Average / 3	10.00		
New Mexico	Public Service Co. of NM	C-15-00261-UT	Electric	Vertically Integrated	9/28/2016	9.58	Below Average / 2			9.58
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-121 (Elec)	Electric	Vertically Integrated	11/9/2016	9.80	Above Average / 2	9.80		
Oklahoma	Public Service Co. of OK	Ca-PUD201500208	Electric	Vertically Integrated	11/10/2016	9.50	Average / 3			9.50
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-120 (Elec)	Electric	Vertically Integrated	11/18/2016	10.00	Above Average / 2	10.00		
Florida	Florida Power & Light Co.	D-160021-EI	Electric	Vertically Integrated	11/29/2016	10.55	Above Average / 2	10.55		
California	Liberty Utilities CalPeco Ele	A-15-05-008	Electric	Vertically Integrated	12/1/2016	10.00	Average / 1	10.00		
South Carolina	Duke Energy Progress LLC	D-2016-227-E	Electric	Vertically Integrated	12/7/2016	10.10	Average / 3			10.10
Colorado	Black Hills Colorado Electric	D-16AL-0326E	Electric	Vertically Integrated	12/19/2016	9.37	Average / 2		9.37	
Nevada	Sierra Pacific Power Co.	D-16-06006	Electric	Vertically Integrated	12/22/2016	9.60	Average / 2		9.60	
North Carolina	Virginia Electric & Power Co.	D-E-22, Sub 532	Electric	Vertically Integrated	12/22/2016	9.90	Average / 1	9.90		
Idaho	Avista Corp.	C-AVU-E-16-03	Electric	Vertically Integrated	12/28/2016	9.50	Average / 2		9.50	
Wyoming	MDU Resources Group Inc.	D-20004-117-ER-16	Electric	Vertically Integrated	1/18/2017	9.45	Average / 3			9.45
Michigan	DTE Electric Co.	C-U-18014	Electric	Vertically Integrated	1/31/2017	10.10	Above Average / 3	10.10		
Arizona	Tucson Electric Power Co.	D-E-01933A-15-0322	Electric	Vertically Integrated	2/24/2017	9.75	Average / 3			9.75
Michigan	Consumers Energy Co.	C-U-17990	Electric	Vertically Integrated	2/28/2017	10.10	Above Average / 3	10.10		
Minnesota	Otter Tail Power Co.	D-E-017/GR-15-1033	Electric	Vertically Integrated	3/2/2017	9.41	Average / 2		9.41	
Oklahoma	Oklahoma Gas and Electric Co.	Ca-PUD201500273	Electric	Vertically Integrated	3/20/2017	9.50	Average / 3			9.50
Florida	Gulf Power Co.	D-160186-EI	Electric	Vertically Integrated	4/4/2017	10.25	Above Average / 2	10.25		
Missouri	Kansas City Power & Light	C-ER-2016-0285	Electric	Vertically Integrated	5/3/2017	9.50	Average / 3			9.50
Minnesota	Northern States Power Co. - MN	D-E-002/GR-15-826	Electric	Vertically Integrated	5/11/2017	9.20	Average / 2		9.20	
Arkansas	Oklahoma Gas and Electric Co.	D-16-052-U	Electric	Vertically Integrated	5/18/2017	9.50	Average / 1	9.50		
North Dakota	MDU Resources Group Inc.	C-PU-16-666	Electric	Vertically Integrated	6/16/2017	9.65	Average / 1	9.65		
Kentucky	Kentucky Utilities Co.	C-2016-00370	Electric	Vertically Integrated	6/22/2017	9.70	Average / 1	9.70		
Kentucky	Louisville Gas & Electric Co.	C-2016-00371 (elec.)	Electric	Vertically Integrated	6/22/2017	9.70	Average / 1	9.70		
Arizona	Arizona Public Service Co.	D-E-01345A-16-0036	Electric	Vertically Integrated	8/15/2017	10.00	Average / 3			10.00
California	San Diego Gas & Electric Co.	Advice No. 3120-E	Electric	Vertically Integrated	10/26/2017	10.20	Average / 1	10.20		
California	Pacific Gas and Electric Co.	Advice No. 3887-G/5148-E	Electric	Vertically Integrated	10/26/2017	10.25	Average / 1	10.25		
California	Southern California Edison Co.	Advice No. 3665-E	Electric	Vertically Integrated	10/26/2017	10.30	Average / 1	10.30		
Florida	Tampa Electric Co.	D-20170210-EI	Electric	Vertically Integrated	11/6/2017	10.25	Above Average / 2	10.25		
Alaska	Alaska Electric Light Power	D-U-16-086	Electric	Vertically Integrated	11/15/2017	11.95	Below Average / 1			11.95
Washington	Puget Sound Energy Inc.	D-UE-170033	Electric	Vertically Integrated	12/5/2017	9.50	Average / 3			9.50
Wisconsin	Northern States Power Co - WI	D-4220-UR-123 (Elec)	Electric	Vertically Integrated	12/7/2017	9.80	Above Average / 2	9.80		
Texas	Southwestern Electric Power Co	D-46449	Electric	Vertically Integrated	12/14/2017	9.60	Average / 3			9.60
Texas	El Paso Electric Co.	D-46831	Electric	Vertically Integrated	12/14/2017	9.65	Average / 3			9.65
Oregon	Portland General Electric Co.	D-UE-319	Electric	Vertically Integrated	12/18/2017	9.50	Average / 2		9.50	
New Mexico	Public Service Co. of NM	C-16-00276-UT	Electric	Vertically Integrated	12/20/2017	9.58	Below Average / 2			9.58
Vermont	Green Mountain Power Corp.	C-17-3112-INV	Electric	Vertically Integrated	12/21/2017	9.10	Average / 3			9.10
Idaho	Avista Corp.	D-AVU-E-17-01	Electric	Vertically Integrated	12/28/2017	9.50	Average / 2		9.50	
Nevada	Nevada Power Co.	D-17-06003	Electric	Vertically Integrated	12/29/2017	9.51	Average / 2		9.51	

State	Company	Case Identification	Service	Case Type	Date	Return on Equity (%)	RRA Rank	Bottom Tier		
								Top Tier (Average/1 and higher)	Middle Tier (Average/2)	(Average/3 and lower)
Kentucky	Kentucky Power Co.	C-2017-00179	Electric	Vertically Integrated	1/18/2018	9.70	Average / 1	9.70		
Oklahoma	Public Service Co. of OK	Ca-PUD201700151	Electric	Vertically Integrated	1/31/2018	9.30	Average / 3			9.30
Iowa	Interstate Power & Light Co.	D-RPU-2017-0001	Electric	Vertically Integrated	2/2/2018	9.98	Average / 1	9.98		
North Carolina	Duke Energy Progress LLC	D-E-2, Sub 1142	Electric	Vertically Integrated	2/23/2018	9.90	Average / 1	9.90		
Minnesota	ALLETE (Minnesota Power)	D-E-015/GR-16-664	Electric	Vertically Integrated	3/12/2018	9.25	Average / 2		9.25	
Michigan	Consumers Energy Co.	C-U-18322	Electric	Vertically Integrated	3/29/2018	10.00	Above Average / 3	10.00		
Michigan	Indiana Michigan Power Co.	C-U-18370	Electric	Vertically Integrated	4/12/2018	9.90	Above Average / 3	9.90		
Kentucky	Duke Energy Kentucky Inc.	C-2017-00321	Electric	Vertically Integrated	4/13/2018	9.73	Average / 1	9.73		
Michigan	DTE Electric Co.	C-U-18255	Electric	Vertically Integrated	4/18/2018	10.00	Above Average / 3	10.00		
Washington	Avista Corp.	D-UE-170485	Electric	Vertically Integrated	4/26/2018	9.50	Average / 3			9.50
Indiana	Indiana Michigan Power Co.	Ca-44967	Electric	Vertically Integrated	5/30/2018	9.95	Average / 1	9.95		
Hawaii	Hawaiian Electric Co.	D-2016-0328	Electric	Vertically Integrated	6/22/2018	9.50	Average / 2		9.50	
North Carolina	Duke Energy Carolinas LLC	D-E-7, Sub 1146	Electric	Vertically Integrated	6/22/2018	9.90	Average / 1	9.90		
Hawaii	Hawaii Electric Light Co	D-2015-0170	Electric	Vertically Integrated	6/29/2018	9.50	Average / 2		9.50	
New Mexico	Southwestern Public Service Co	C-17-00255-UT	Electric	Vertically Integrated	9/5/2018	9.10	Below Average / 2			9.10
Wisconsin	Wisconsin Power and Light Co	D-6680-UR-121 (Elec)	Electric	Vertically Integrated	9/14/2018	10.00	Above Average / 2	10.00		
Wisconsin	Madison Gas and Electric Co.	D-3270-UR-122 (Elec)	Electric	Vertically Integrated	9/20/2018	9.80	Above Average / 2	9.80		
North Dakota	Otter Tail Power Co.	C-PU-17-398	Electric	Vertically Integrated	9/26/2018	9.77	Average / 1	9.77		
Kansas	Westar Energy Inc.	D-18-WSEE-328-RTS	Electric	Vertically Integrated	9/27/2018	9.30	Below Average / 1			9.30
Indiana	Indianapolis Power & Light Co.	Ca-45029	Electric	Vertically Integrated	10/31/2018	9.99	Average / 1	9.99		
Kansas	Kansas City Power & Light	D-18-KCPE-480-RTS	Electric	Vertically Integrated	12/13/2018	9.30	Below Average / 1			9.30
Oregon	Portland General Electric Co.	D-UE-335	Electric	Vertically Integrated	12/14/2018	9.50	Average / 2		9.50	
Michigan	Consumers Energy Co.	C-U-20134	Electric	Vertically Integrated	1/9/2019	10.00	Above Average / 3	10.00		
Total Cases						71		36	12	23
Mean						9.76		9.95	9.45	9.62
Median						9.70		9.97	9.50	9.50
Maximum						11.95		10.55	9.60	11.95
Minimum						9.10		9.50	9.20	9.10

Source: RRA